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## The Honey Producer and the Press

By O. A. Fitzgerald

OF all industries I doubt if there is another that devotes as much time in annual conventions and gatherings to discuss diseases affecting the producing units. I have attended numerous beekeepers' sessions and, frankly, I first thought the activity of keeping bees concerned itself more with foulbrood, sacbrood and kindred ailments than with actual production of honey. Every speaker on the program at the first convention I attended, whether a visiting dignitary or a home producer, and regardless of the subject he started on, eventually got back to the problem of disease. First impression was that the industry was disease-ridden.

This situation, which I am told is somewhat general, warrants consideration in its relation to the great publicity and information organization—the press. The danger is that the unknowing and unsuspecting reporter, assigned to cover a beekeepers' session, will act upon his first impression and will shape his report around disease, and disease alone. Such publicity is unjustified by actual facts; but as long as beekeepers insist upon talking about disease so much they must watch this possibility with alertness.

The idea for this article was born at the last annual convention of the Utah State Beekeepers' Association. Early in the convention Mr. N. E. Miller, of Provo, Utah, who is recognized as the largest honey producer in the world, arose and addressed a few words "to the newspaper reporters present." His remarks were in the nature of a suggestion that all news writers confer with officials of the organization before preparing their articles. His premise was that the majority of discussions in the convention were of a technical nature, of interest solely to beekeepers, and therefore had no part in a report

This article is written by a newspaper reporter who knows bees only from reporting conventions for the daily papers. He shows one thing that is the matter with the present honey market. The news about bees that has appeared in the daily papers for two or three years past has nearly all been about disease. His impression was that the industry was disease ridden. Others are getting the same idea. No wonder the demand for honey is slow. It is time to tell the public a different story.

of proceedings for general consumption.

It so happened that his remarks were directed to me personally. I was the only news writer present. Not content with his first explanation, he arose later to clarify himself. "If the general public is given stories suggesting that beekeepers are unduly worried over the prevalence of disease, the psychological reaction will be bad on the honey market," he said. "The men here are interested in building this industry, and we know that no newspaper man would knowingly do anything that would prove detrimental. I believe that discussions at these conventions should be closed and should not be reported."

After that I felt moved to make a brief answer. My previous experience with beekeepers prompted a reply of this nature: "As a newspaper man, the only one here, I feel moved to make my position clear. As a representative of my paper I am not concerned one whit whether your bees have whooping cough or measles. I am here to gather what facts I can on the economic importance of this

industry to the state of Utah. I have attended several conventions and I must say, however, that disease has been the big subject discussed at every one. The newspapers of the state want constructive news about the industry, and the responsibility to provide constructive angles to supplant those which you do not care to have appear in print devolves upon you men. The state and counties employ bee inspectors. The reports of these men, assigned the task of running down disease and producing beekeepers into keeping up the health of their colonies, must be taken as the negative side. As Mr. Miller has suggested, the industry does not care to have material of that nature given the public. Therefore at every opportunity the personal factors in the industry, individually and as association groups, must keep on the alert for opportunities to disseminate the type of material that will be beneficial to the industry, will stimulate honey consumption, and will have a wholesome effect."

After the meeting Mr. Miller and myself had a friendly chat. He suggested that I, as a newspaper man, write for the American Bee Journal an article suggesting ways for closer cooperation between the beekeeping industry and the press.

First it should be made clear that Mr. Miller's position was well taken. A consuming public given articles suggesting their honey may come from colonies of bees heavily infested with disease certainly is not going to bring a much-sought-for increase in the per capita consumption. To the contrary it will result in a decline. Whenever disease in honeybees is mentioned it might be qualified with the assertion that even honey from such colonies is as wholesome as honey from healthy colonies; in other words, the diseases

peculiar to bees are not communicable to human beings. But when qualifying clauses nullify a preceding assertion, why use the assertion at all?

#### Unfortunate Publicity.

Some years ago the ripe olive industry suffered a body blow when several deaths in the East were ascribed to botulinus poisoning in olives. Stories appeared in the press citing this angle of the unfortunate development and people stopped eating olives. The consumption dropped like a leaden plummet and owners of the olive groves of California, which had been yielding good returns, found themselves holding big surpluses. Just suppose that, at some future time, some self-authorized in-

There are countless ways of keeping honey before the eyes of the public with little expense to the producer. The sin of the industry, it strikes me, is that it has expected honey to "sell itself." Because it is one of the oldest known human foods, as old as the human race, the honey producers, though fully aware of the merits of their product, have figured that others would be attracted to its qualities without undue effort. At the present time production of honey throughout the country is increasing, but consumption is slipping downward. As Mr. Miller declares, it will not help production any to have every article touching upon the industry contain the objectionable reference to disease.

tion, bee owners cannot continue in the business and make it profitable." This disease rises and spreads rapidly and infection may come within a period of a few days, which makes the disease problem more acute in beekeeping than in any other livestock industry.

It would be a fine thing if, at every beekeepers' convention likely to attract newspaper attention, some competent speaker would be assigned the topic of discussing the economic importance of the industry. If, for instance, during the year just past a shipment of honey from that particular state reached a new market, or was shipped overseas, or sold for a premium price, that a speaker should mention it. He should also



Float representing Utah Beekeepers' Association at State Fair

dividual ascribed a mysterious death to contaminated honey. The American apple-producing industry just emerged through such a threatening calamity. Arsenical spray residue was held responsible for several deaths in London and England raised an embargo against American apples not hand-wiped or otherwise cleaned to insure freedom from the dried spray. Had not the apple growers arisen to the emergency and installed wiping appliances with lightning speed, another industry would have received a wallop from which a long while would be required to recover. A similar fate might await the honey producer if someone took a wrong step. Could the industry avert such a disaster?

On the other hand, disease eradication is the biggest problem in the industry. That is why beekeepers always talk about it and at their annual gatherings seek views and experiences of others. The following is taken from the annual report of D. H. Hillman, Utah's state apiarist: "The industry cannot prosper without the control of disease. Honeybees cannot be confined to enclosures, but roam at will in search of sweets. They will rob from another hive during a dearth of nectar in the flowers. Therefore, when a diseased colony becomes weak or dies it is soon robbed of any honey that may remain in the hive, and the infection is carried on to the hives of healthy colonies. Without adequate inspec-

trace the growth of the industry, its future, and give similar wholesome information. In Utah, Mr. Hillman, the bee inspector, presents a very comprehensive and interesting report of this nature. His story is not so technical that any reporter listening, though he had never had the pleasure of being stung by a bee, cannot fill his note book with facts and statements worthy of a good story in the next issue of his paper.

During the year 1926 the beekeepers throughout Utah accomplished excellent results by utilizing their county fairs as publicity channels. During the year I visited most of these fairs and saw some attractive displays of honey. These displays could be augmented further, it

seems to me, by charts and tabulations of figures giving facts on the industry within the county. There is nothing which holds the newspaper man assigned to a county fair like a chart or tabulation giving in brief the story of an industry. The chances are he will take those facts, seek out a leading beekeeper or the sponsor of the honey exhibit, ask numerous questions, and obtain a story of which the industry will be proud.

In another Utah county the beekeepers went even further. During county fair time they made a survey of stores in the fair city, which was the largest in the county, to determine how many were handling honey produced within the county. They found that but one store out of four was offering the high quality domestic honey to its customers. Obviously here was an opportunity, and they capitalized upon it. The other three stores were visited and the attention of their owners called to the honey exhibit at the fair, the story of honey outlined, and the fair ended with substantial honey stocks in all stores. The only slip here was that these same enterprising men did not think of the county newspapers, which were published in the same town. The country editor would have been glad to publish the assembled facts of the industry in his paper. That would have helped the beekeeper, the storekeepers who were adding the new honey stocks, and would have attracted reader attention. The storekeeper might even see the desirability of featuring honey in his advertising in the home town paper.

At the opening of the Utah State Fair in October, 1926, the Salt Lake Chamber of Commerce sponsored a Utah products parade. Mr. J. C. Henager, president of the Utah State Beekeepers' Association, saw an opportunity to reach thousands in that parade. Without consulting the association membership, he provided a float carrying several jars of Utah's pure white honey and bearing the banner, "Eat More Honey—Nature's Pure Sweet." The float, though but one in a mile-long parade, attracted much attention. Doubtless it inspired many to buy at least a small jar of Utah honey.

The float does not attract newspaper space, however, as much as does a fine exhibit at a county fair or a prepared report on the industry. Every New Year's most of the newspapers of the country devote considerable space to reviews of the twelve months just ended. The leading industries and businesses are reviewed. Honey production often is dispatched with a paragraph or two in the general agricultural review. True, it is

not a major industry, but if the industry would cooperate more closely with the press the space accorded the beekeepers would be far greater than it is now.

The situation in Utah is indicative of what may be accomplished elsewhere. Utah eats a good deal of her honey at home. Per capita consumption is around six pounds, which is considerably larger than throughout the country. If the other honey states could boost their own consumption a pound or two it would reduce materially the surplus.

This article must not be construed to mean that close cooperation with the press will supplant a nationwide advertising campaign for honey. Western producers realize that such a campaign must come eventually. National advertising has nothing to do, however, with the desirability for a movement to put before the press a type of material that will make its writers think constructively about an industry and throw out assertions on disease.

When the national movement comes, the cooperation of the press will prove beneficial there too. The bee is the most remarkable living organism. This alone will interest newspaper writers. They will go into its activities, and one cannot study and write about the bee without saying something about honey and its uses.

This little treatment on honey was handed me by Mr. J. E. Eckert, of the Intermountain Bee Culture Laboratory, Laramie, Wyoming. I do not doubt but that it might find space in many newspapers, prefaced, of course, by material relating to the honey industry in the particular locality served by the paper:

"Flavor of honey—The flavor of honey is derived from the volatile oils which constitute the odors of flowers, and, therefore, the flavors of honey vary just as much as do the perfumes of the flowers from which the honey is gathered.

"Calories in honey—Honey will supply energy to the extent of 100 calories of heat to every tablespoonful of honey.

"Nutritive value—Nutritive value of honey lies in the fact that it contains from 60 to 90 per cent of simple sugars, dextrose, and levulose, which need no inversion; that it also contains a small per cent of mineral substances, such as calcium, phosphates, potassium, iron, and others; and that it also contains a small per cent of protein; and the B-vitamin has been found in certain honeys.

"Use of honey as a food—Generally used as a spread on hot biscuits, cakes, waffles, cereals, fruits, in tea and coffee; adds to the flavor and

keeping qualities of fruits in canning; delicious when made into candies or when used with peanut butter or chopped nuts in the making of sandwiches; makes puddings more delicious and cookies and bread keep fresh much longer when it is used in place of sugar.

"Honey is an ideal substitute for sugar and candy for children, as it is a food and satisfies their craving for sweets, does not decay the teeth, and has a slightly laxative effect which keeps their system in good condition."

Newspapers are keenly interested in the beekeeping industry in their territory, as they are in any industry. Some papers, but too few, possess that aggressiveness which leads them to the industry. Others must be helped along frequently. A system of cooperation which would help the industry to keep the constructive side forward and references to disease at the minimum might be outlined in the following manner:

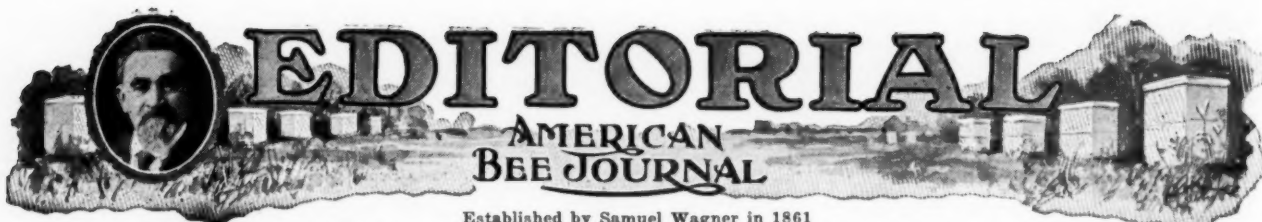
1. Utilize all space possible at the county fair and present a comprehensive display showing the scope and importance of the exhibit.
2. Establish contact with newspapers giving attention to county fairs. Call their attention to the honey displays and furnish them with all facts desired. Invite them to visit leading apiaries throughout the year and give write-ups to leading honey producers, stressing the conditions under which the honey is produced.
3. Prepare honey floats in parades.
4. Give attention to constructive material at annual conventions; have speakers handle this matter apart from bee diseases.
5. Remember that the newspaper is the friend of the industry and willing to help. Tell them about the doings of your producers' association.

All of this can be accomplished without transgressing into the field of advertising. A newspaper is glad to give attention to an industry without charge. And—beekeepers must recognize—the press cannot boost an industry without calling attention to its chief product.

## A Honey Beautifier

"Orange Honey Beautifier," a preparation that "whitens the skin in twenty minutes" and is advertised as "sensationally popular among the motion picture stars in Hollywood," is being demonstrated in toilet goods departments of department and dry goods stores in different parts of the country.





## EDITORIAL AMERICAN BEE JOURNAL

Established by Samuel Wagner in 1861

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### A Warning

There is apparently considerable chance that bees will be suddenly short of food during the spring, which is now so close at hand. Mr. P. Peterson, of Kimballtown, Iowa, sends us the following letter of warning:

"There is a condition now existing that may cause large losses of colonies before spring throughout the Middle West unless we take measures to prevent it.

"The honeyflow ended rather early last fall and in places the bees went into winter with less honey than usual. November and December were cold and stormy, with few days when bees could fly. January was warmer than ordinary, with many days when bees flew freely. The first time that I became aware of anything unusual was on the fourth or fifth of this month, when I noticed young bees in front of several hives. Then I opened some hives that were only lightly packed and found two to four frames with brood in each, and some with quite a number of young bees. Those queens must have started laying soon after January 1, and the colonies are using up their stores of honey fast and will be likely to starve before spring unless they are fed soon. I did not open any of the colonies that were packed in two-hive bodies with fifty or sixty pounds of honey, because I consider them safe for another month at least, but I noticed young bees at several of them, so I suppose that they started brood rearing about the same time as the others. That is about a month earlier than usual, and it means that they will use ten or twelve pounds more per colony than if brood rearing had started some time this month.

"How are your bees supplied with stores? Unless they had about sixty pounds in the fall, they are in danger of starving if the spring should be late and cold. On the other hand, if they had that much in the fall or are fed soon they will build up to full strength early and be ready to gather a good crop of honey.

"The honey plants seem to be in good condition over most of the country. Why not make sure that your bees are in condition to take advantage of that?"

### U. S. Statistics

Dr. E. F. Phillips, in a private letter, reminds us of the unsatisfactory conditions of the last census concerning bees and honey, since the statistics concerning our interests were not taken at all in towns and cities. This left out probably a half of the entire stock of bees in the United States, for many beekeepers keep their bees within the limits of incorporated cities, even although they may be near the outskirts. It is very important, if we wish to know just how our business stands, to have all bees recorded in the census. It is the same with the production of honey and beeswax. So our readers are urged to write to the Director of the Census Bureau several months before the census is begun, in order that he may see to it that bees are placed in the list of statistics in cities and towns.

The better our business looms up in the census, the more attention will be paid to it to promote our interests.

Many people have no idea at all of the great value of our honey production. It amounts to several hundred million pounds annually.

Preparations will probably soon be made for the next census, that of 1930, and we must not let them prepare their blanks without letting them know that bees within city limits must not be disregarded.

### A Cowan Library

The work of our own beekeepers in establishing memorial libraries in the names of Dr. C. C. Miller and Father Langstroth is being repeated in Great Britain with a Memorial Library to the name of T. W. Cowan. The British Bee Journal of January 13 publishes the following:

"The Council of the British Beekeepers' Association have decided that the memorial to the late President shall be a National library named 'The Cowan Memorial Library.'

"To this end they propose to purchase the library of the late Mr. Cowan, which has taken a lifetime to collect. It consists of 1800 volumes and is unique and second to none in the world. Arrangements will be made to house the library in London, so that it will be available to every beekeeper in Great Britain and northern Ireland, either by loan of books through the post or actual visit to read them in the library."

A subscription by beekeepers of about 260 pounds is desired. A sum of over 25 pounds has already been subscribed.

### More About Apiary Registration

The editorial reference to apiary registration in a recent issue of this Journal has aroused some comment. To make the objection clear it should be said that some laws have been drawn in such a manner to as require the beekeeper to register and pay a fee to some special officer. A much better way to accomplish the same result is to require those who make up the tax rolls to return the names of all persons keeping bees. If any special tax is required it should be returned by the assessor.

To require the beekeeper to register his bees is to set up a special order which requires particular effort to enforce. If we understand the Utah recommendation correctly, it is that the special registration provision be repealed and the tax on bees be collected by the usual means. Far better results are likely to be obtained by requiring assessors to return the name and address of all persons owning bees, than by expecting the beekeeper to go to the trouble of registering.

### Bees Blind to Red Light

R. E. Richardson, in the British Bee Journal, makes the statement that bees are entirely blind to the red light such as is used in the photographic room. He speaks of having handled a hive in this way and asserts that none of the bees took flight; but he reported having had a few stings, nevertheless.

### Our Russian Edition of the "Honeybee"

We do not try to keep a stock of the Russian language edition of the Langstroth-Dadant book, on hand. But we have, just now, a few spare copies, which we sell at the same price as the English edition. The work is published in Leningrad.



## The American Honey Producers' League

On page 135 appears a report of the American Honey Producers' League meeting at New Orleans, January 25-27, by its new secretary, Mr. C. L. Corkins, of Wyoming.

As stated by Mr. Corkins, this was one of the most enthusiastic meetings held in recent years by a national beekeepers' organization. Controverted sectional differences proved to be only misunderstandings and the convention quickly settled down to constructive discussion of the betterment of the industry as it affects the whole country.

A new constitution was adopted for the League at this convention. This fact does not, in itself, mean that this organization will succeed, because the success of an organization is not necessarily dependent on its constitution, but upon the attitude of its members and the actual work which it does.

A propitious fact, however, is that there were represented at this meeting nineteen states, some ten state bee departments, our government bee laboratory, three bee journals, several bee supply manufacturers, a number of queen breeders, besides many producers of honey. All were heartily in unison on the proposition, and went home feeling that now a coordinated effort could be made through the American Honey Producers League, which would have larger possibilities of success than any effort in recent years.

Some of the salient features of the new plan are that individual memberships will be \$3.00; state organizations may affiliate on payment of an initiation fee of \$10.00, with annual dues of \$3.00 for each twenty-five members; county organizations pay initiation of \$5.00, with annual fees of \$3.00 for each twenty-five members. Elections will be held by mail, through an election commissioner. Many committees are to be appointed by the president, Prof. H. F. Wilson, of Wisconsin. The new plans embody a much greater effort for publicity of honey and its uses, for coordination of investigational and research activities and promotive work along the lines of honey marketing, besides an effort to get closer cooperation between state departments along special lines of contact.

The convention itself was one long to be remembered by those present, from the high type of matter presented there. No one who has not heard Miss Barber, of the Kellogg Company, can realize the power for good that this estimable lady and her company are doing for the dissemination of literature and publicity for honey as a food. It behooves every one of us to get behind these efforts in every way possible and not only cooperate but ally our efforts with theirs.

The practical lecture by Dr. W. H. Gates, of the Louisiana State University, on the subject of genetics as applied to the honeybee, was presented in such a manner as to make a lasting impression as to the possibility of progressive breeding in the honeybee, especially in view of the accomplishments of Dr. L. R. Watson in artificial insemination and those disclosed by Mr. Foster, of Florida, as being accomplished by Charles W. Quinn. We, as laymen, need to hear, explained, more of the possibilities of this work.

A report of this meeting would not be complete without acknowledgment of the wonderful hospitality of the Louisiana beekeepers under the able leadership of Dr. Spencer and Mr. Dalton. Banquets, luncheons, crab feasts, and sightseeing excursions were all arranged so as not to interfere with the business program, but at the same time fill every spare moment and leave in the minds of every one attending the feeling that they would like to "come again."

We understand that the first issue of the new League bulletin will be issued soon and will contain a copy of the new constitution as well as an itemized report of the New Orleans meeting. We would urge our readers to write Mr. C. L. Corkins at Laramie, Wyoming, for a sample copy of this issue and become conversant with the features of the new plan.

We would also urge our readers to get behind this organization, not only in a financial way, but also by lending the moral support which is so necessary for the success of any association. All of us could do a great deal more in the line of publicity of honey as a food if

we would make it a point to do so. The League should be able to plan coordinated activities which will allow every one to help in this.

Let us not be misled into assuming that great accomplishments can come through these efforts in a single year. Such efforts gain momentum slowly, but if properly aided and supported, and continuously so, can become a great movement for the good of our industry.

M. G. D.

## Package Bees from the South

The season of package bees will soon be here. This industry has grown in a few years to immense proportions. To perceive it, one only needs to read the numerous advertisements of southern breeders. The reason is obvious. Bees may be produced much earlier and much more cheaply in the South than in the North. On the other hand, the honey of the North is of much better quality than that of the South. So this business is bound to grow for a long time to come.

There are stumbling-blocks in this trade, but they may be avoided by the use of judgment and the consideration of the other man's interests. The honey producer of the North must bear in mind that the southern breeder cannot produce bees as he could make beehives or other materials, in exact accordance with the orders. He is governed by changes in the weather, by early or late springs. He must prepare for more orders than he expects if he is to fill his orders promptly. The northern man must therefore send his order early, stating the specific time when he wants the bees delivered. He must bear in mind that the transportation of the bees and their delivery are in the hands of a third party, the express company. The latter is just as interested in doing good work as the breeder and the consignee, for there is money in transporting bees. But the consignee needs to take the regulations to mind. When bees arrive in good shape, all is well. But if they arrived in bad order, he must not lose his temper and refuse them. He must take them, giving receipt attested by witnesses, of the bad condition of part or all of the shipment, so that a claim for loss or damage may be filed afterwards with the proper authorities.

The shipper, on his side, must do his best to give satisfaction. He must at all times promptly acknowledge orders or instructions. It will not do to say, "I was too busy." Nothing is so disappointing to a man who orders something, and especially perishable stock, as to be left in ignorance of whether the order was received and is to be filled as desired. We must put ourselves in the other man's place and realize what we would do, or think, if we had his job to perform.

There are very few unreliable men among the shippers of bees, and the unreliable ones are weeded out of a magazine's advertising columns as fast as they are discovered. One of our advertisers made the remark to me that he could "get a pass to heaven with the certificates you required of me."

So the purchaser must take it for granted that the man he deals with is honest and act with him in that way.

On the whole, use patience and forbearance on both ends of the line and all will be well.

## Granulated Versus Liquid Honey

In reply to the question asked by Mr. Bamis (should be Baines), of New Zealand, in the American Bee Journal of January, page 29, as to where the "Canadian Poultry World" got its information of the refrigerating of honey in New Zealand, to secure granulation, Florence A. Greenwood, of Victoria, B. C., editor of the beekeeping section of this magazine, states that this information was secured from the "Cold Storage and Produce Review" of New Zealand, and sends us the quotation.

The fact remains that in most countries people accept granulated honey, while here even the children of some beekeepers appear to believe that honey is spoiled when it "goes to sugar." Our editor prefers granulated honey to liquid honey. The objections to the former are only prejudice.

# Influence of Temperature on the Honeyflow

By A. V. Mitchener

THE province of Manitoba, Canada, lies north of 49° L. North Dakota is situated immediately to the south. Manitoba is 280 miles from east to west along the southern boundary and 770 miles from north to south. Beekeeping as yet is carried on only in the southern part of the province, which is devoted to agriculture. In summer the temperature occasionally goes above 90° F. and the days of sunshine are many and long. The nights are comparatively cool. In general the climate is invigorating and delightful.

In the summer of 1922 an average colony of bees was placed on a set of scales in the Manitoba Agricultural College apiary and a daily record of its weight kept throughout the summer. The gains made by the colony fluctuated from day to day to such a conspicuous extent that weather records were obtained from the Physics Department at the college and an attempt was made to see what relation existed between the honeyflow and daily hours of sunshine, combined with minimum and maximum daily temperatures. A relationship was at once apparent. Since 1922 one or two colonies of bees have been kept on scales in the college apiary each year.

In 1924 an attempt was made to collect data on the period of the year when surplus honey accumulated in the apiaries of the province. Representative beekeepers were selected from fifteen scattered points over the whole beekeeping area of Manitoba. Each of these beekeepers agreed to keep a colony of bees on scales from the first of May to the end of September and to record its weight daily throughout these five

months. I wish to express my appreciation to these beekeepers who have made possible such information as we have, of the honeyflows of the province in general. Not only did they keep these records for 1924, but many of them have kept similar records for 1925 and 1926. In each of the three years mentioned, fifteen beekeepers submitted their records for the five months of the summer. Figure 1 shows the result of the compilation of these records for the three years. The average daily gain per hive is shown for five-day periods throughout the summer. As an example for the five-day period July 29 to August 2, inclusive, 1924, the average daily gain for the fifteen colonies recorded was 3.2 pounds of honey. The fifteen colonies for the five-day period, therefore, stored a total of  $15 \times 5 \times 3.2 = 240$  pounds of honey. The season during which the bees are active in Manitoba usually extends from about the third week in April, when the bees are removed from the cellars, to early November, when the colonies are again placed in winter quarters. Brood rearing commences as soon as the bees are brought out of the cellar. From the records shown in Fig. 1, it will be noted that the bees begin to make gains during the latter part of May. The season of 1924 was about two weeks late. Normally about the middle of June the colonies scarcely hold their own in weight. About the end of June the honeyflow begins in earnest. Between the middle of April and this time the bees build up strong colonies of young workers. This is not only true of overwintered colonies but is also true of imported packages which have been brought in

and placed in hives by the first of May. One important point to note is that our surplus honey is stored from one prolonged flow. Instead of having two or more seasonal flows of short duration, all our surplus-producing flowers come into bloom during this one period. The honey season in this area is concentrated within the limits of a little over two months. Sometimes, however, colonies make gains until the middle of September. What a few weeks between honeyflows means to the yearly crop is indicated by the records of one very strong colony in the M. A. C. apiary during the month of September, 1926. This month was unseasonably cold and cloudy, and during this period this particular colony lost weight to the extent of twenty-five pounds. Brood rearing causes the consumption of a great deal of honey.

Following out of our study of the relation between honeyflows and sunshine and temperature, as shown by our records in the college apiary, we undertook a more extensive study of this subject in 1926. All those beekeepers who were recording the daily weight of a colony were also requested to record the daily maximum and minimum temperatures and also the estimated number of hours of sunshine each day. For the months of July and August, whose records are shown in Fig. 2, the average production of eleven colonies kept on scales was taken. During July nine beekeepers kept the maximum temperature, eight kept the minimum temperature, and seven estimated the daily hours of sunshine. During August six beekeepers recorded the maximum temperature, six the minimum temperature, and nine estimated the daily hours of sunshine. These respective records are averaged to secure the data shown in Fig. 2. As can be seen from consulting Fig. 1, July and August are our best months, and for this reason these two months were selected for study.

The chart, figure 2, shows the average daily production for the eleven colonies from as many widely separated points in Manitoba. The record in pounds may be read from the left side of the chart. As an example, on July 5 the average daily production per colony was 5.2 pounds. The daily maximum and minimum temperatures may be read from the right side of the chart. The extremes are indicated at the ends of the heavy vertical lines under

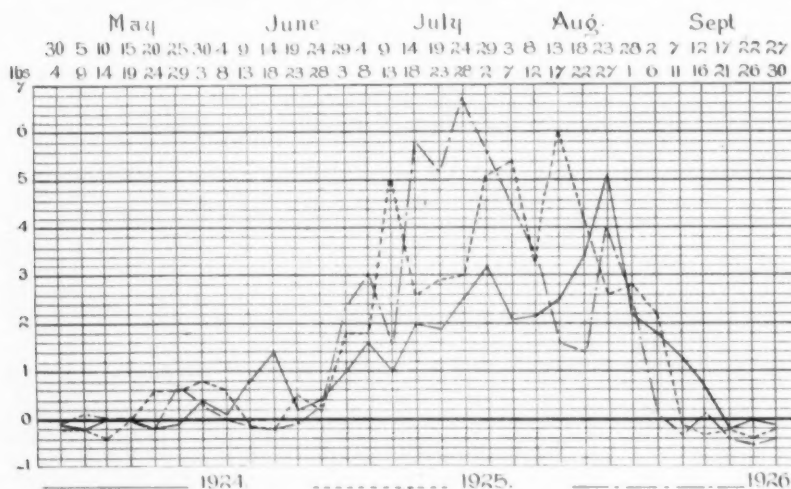


Fig. 1. Honeyflow in Manitoba for five-day periods for the years 1924, 1925, and 1926. The total surplus honey for each year is from one continuous flow



# MANITOBA

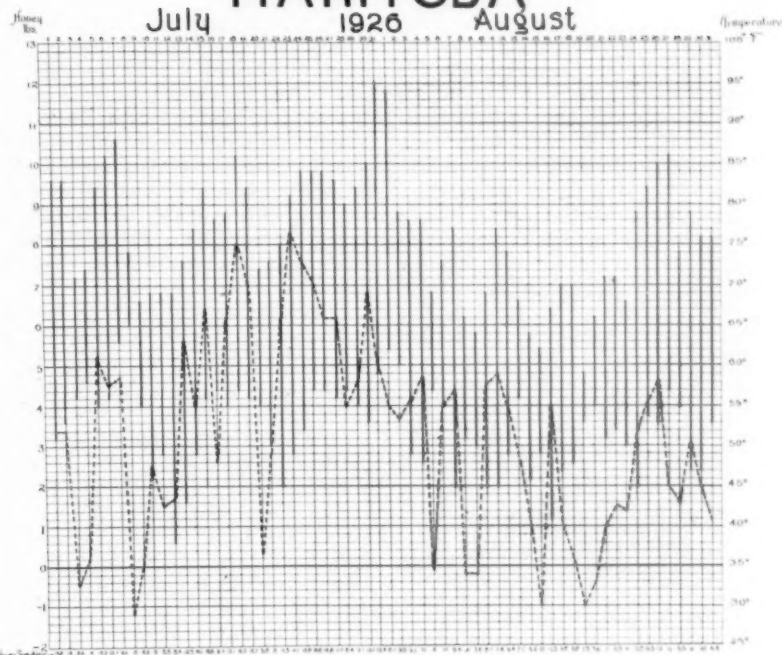


Fig. 2. Data compiled from widely separated apiaries in Manitoba to show what happens in an average colony under average conditions of sunshine and temperature

each date. The maximum is for the day indicated and usually occurred shortly after noon. The minimum is that of the night previous. As an example, on July 30 the maximum temperature was 85° F., while the minimum of the night previous was 53° F. There was a spread of 32° F. between the night temperature and that of the day following, namely, July 30. The hours of sunshine are shown in figures for each day at the bottom of the line indicating the particular day. For example, on August 3 there were 9.7 hours of sunshine.

Let us now examine the effect of hours of sunshine and the spread of temperature between the minimum of the night and the maximum of the day, upon the average daily yields. In the first place we should note that the honeyflow varies from day to day. The daily hours of sunshine also vary, and, further, the maximum and minimum temperatures vary considerably, which is another way of saying that the spread is not at all constant. It is reasonable to suppose that the flora is fairly constant over a short period of time. Figure 2 represents the average colony under average condition of sunshine and temperature. As an example, begin with July 3. The spread is 15° F. and the total sunshine for the day is 2.6 hours. The colony actually lost five-tenths pound weight. On July 4 the spread was 14° F., while there were four

hours of sunshine and the colony gained two-tenths of a pound. On July 5 the spread is 27° F. and there were 13.2 hours of sunshine. The colony gained 5.2 pounds that day. On July 6 the spread is 30° F. and there were 13.7 hours of sunshine. The colony gained 4.5 pounds. On July 7 the spread was 25° F., sunshine 9.6 hours, and gain 4.7 pounds. On July 8 the spread was only 9° F., with no hours of sunshine, and the colony lost weight to the extent of 1.2 pounds. Examine the period of July 9 to July 20, or in fact any consecutive number of days.

A study of the data seems to prove that, other things being practically the same, the more hours of sunshine there are daily, the more nectar the bees bring into the hive. Evidence is also produced to show that the greater the spread between the night and the day temperature, the greater the increase in the weight of the hive. Further, it seems that the higher the spread is, namely, the hotter it is during the day, the greater the gains made by the colony. Maximum daily temperature is somewhat dependent upon sunshine. If the sun shines for a short period only, during the day, the maximum temperature will probably not be extremely high. If, on the other hand, the sun is out all day a high maximum may be expected.

August, 1926, was abnormally cool in Manitoba. By consulting Fig. 1, it can be seen that in 1924 and 1925

the peak yield occurred in August. This was not true in 1926.

A stimulating period of nectar secretion from willow and dandelion, of sufficient duration to ensure strong colonies at the beginning of the main flow, an ample supply of plants producing surplus nectar, many hours of sunshine daily, and a big spread between the night and day temperatures seem to be some of the essentials to big yields of honey. The average production per colony in Manitoba for the past five years is, according to the estimates of the provincial apiarist, 127 pounds. The conditions which prevail in Manitoba are very similar to those found in the northern states and other western provinces in Canada. The area of honey production in America seems to be moving north. Who knows but what in a few decades hence we shall find ourselves on the southern fringe of the principal honey-producing area of this continent?

Manitoba.

## British Columbia Honey Production, 1925

The British Columbia Provincial Apiarist reports that little progress was made in the bee-raising industry during 1925, according to a report from Consul H. S. Tewell, Vancouver, B. C. The production of honey amounted to 638,319 pounds, as against 679,289 pounds in 1924, the decrease being caused chiefly by protracted drought and forest fire smoke. The number of beekeepers, however, increased from 2,408 in 1924 to 2,426 in 1925, and the number of hives from 14,604 to 15,505. In addition to local production, the markets of British Columbia consumed 125,000 pounds of honey imported from other provinces during 1925.

## Honey Bunk

Friend health fan advises omitting sugar from diet of children and replacing it with honey. M. C. A.

A.—Honey is all right if the kids like it, though I believe sugar is quite as wholesome and desirable.—(Questions and Answers in St. Paul Pioneer Press.)

Just as well say that gruel is as good as pure milk for little children. Sugar is a boiled and chemically purified product, while honey is the pure product of nature just as is milk. None of the preparations of man can be compared to the natural products of nature. Too much "bunk" in newspaper advice.—Editor.



# Visiting Beekeepers Abroad

FRANCE

By E. F. Phillips

(Continued from last issue)

THE following morning we went to Morlaas and other points about Pau, being served with an excellent banquet at Morlaas, at which time I was made honorary president of the local branch of the Union of National Combatants, an organization similar to the American Legion. We had tea with Baron Echats, a delightful Basque beekeeper, in his new home near the old family castle, dating back to about 1076. The Baron was educated in England and his wife also speaks English readily, so we had a delightful time.

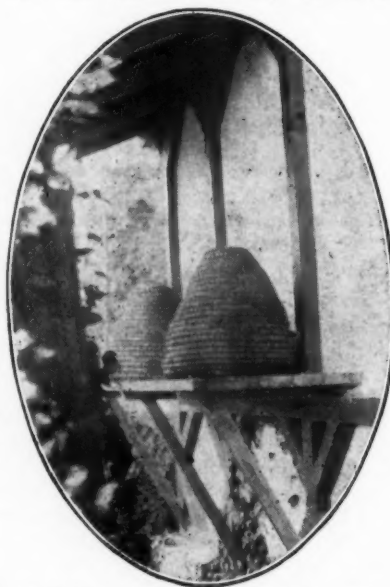
There we were met by M. C. Granel, a beekeeper whose home is at Lesperon, in the Department of the Landes, and he took us in his automobile to one of his homes. We had been delayed in leaving Pau and it was almost dark when we left Baron Echats' home, so that it was nearly midnight when we finally arrived at the home of M. Granel. In spite of the late hour, the family, consisting of an older son, eight beautiful French girls and a fine little boy, had waited dinner for us.

Then you know what beekeepers are. M. Granel had seen something in one of his hives that he thought was American foulbrood, and he could not sleep until Pere Baldens and I had examined it, which we did by lantern and candle light. The diagnosis did not take long, but then we sat down on a hive apiece and talked bees until 2:30.

The following morning, June 24, we started out in M. Granel's automobile and visited apiaries in that section of the Landes. This is the region of the best commercial beekeeping that we saw in France, or in fact on the entire trip, and the apiaries of M. Granel are strictly American in style and management. The honey here is chiefly from heather, which we were again to see in England and Scotland. The entire department is rather new, in that it was formerly a salt marsh which was drained only about seventy-five years ago. Turpentine pines were then planted and the turpentine industry is well developed in the section. Between the pines two species of heather grow abundantly, furnishing the bees with bountiful supplies of nectar for two crops annually. The native hive is not a straw skep of the usual type, but an affair with a constriction in the middle, built of strips of split wood covered with

mud. We saw such hives in almost every apiary, and it is hard to convince the beekeepers that they should use movable frame hives when they are compelled to squeeze the heather honey from the combs, since it is too thick to extract by any known machine. In the better apiaries such hives are used only to furnish the desired increase. Here is a puzzle for the beekeeper.

At noon we reached the seaside resort Mimizan-les-Bains, where we had a banquet with the beekeepers who had gathered there, and in the



An artistic corner in the apiary of the University of Toulouse

afternoon we went out to see more apiaries, ending the day by arriving at the other home of M. Granel, where we spent the night. His apiary here consisted of hives built on strictly American lines, and he showed me colonies of bees headed by queens from the United States.

The following morning we were again on the road to visit apiaries of the Landes, and about noon we reached Pissos. Here, among other apiaries, we visited one belonging to M. Lassus, proprietor of the hotel where we later had a banquet. M. Lassus is the champion handler of bees encountered in all my experience. He lifted the covers of his de Layens hives without smoke and removed frames with one hand, and without much consideration for the feelings of his bees or of his many visitors that day. Pere Baldens and I noted that several of his hives bore the legend that they had "false queens," and we later learned that

this is the name which he gives to queens lacking one or more legs or wings. We were surprised that not all the hives were thus marked after we saw him operate, but no one was stung except Mrs. Phillips, and she walked with a limp for the next three days.

The next morning, which was Sunday, we were met by a group of Bordeaux beekeepers, including M. Lataste, with whom I had had correspondence for some years and who at one time used some of the moving picture films which were made in Washington. After visiting the Bordeaux Fair, which was then in full blast, we went to the experimental apiary of the local society to see a demonstration which is part of their regular course of beekeeping instruction. At noon we attended a banquet given by the Gironde society at one of the cafes of the city and later visited a chateau near the city. M. Nicholi, president of the society, was the life of the party everywhere and entertained us constantly with his humor.

The following morning we left Bordeaux, after saying farewell to M. Michaud, who had come that far with us from Pau, and we were sorry to leave him behind. We are hoping that he will some day get back to this continent, even though he decides to stay in Canada, where he was born, for we should be glad to have an occasional visit with him. Our first stop was Poitiers, where the Saracens were defeated in the year 732, and called on Abbe Prieur, editor of *L'Apiculture Francaise*. We were met at the depot by MM. Mathiew and Coleville, of Chateauroux, and had dinner with them before calling on the Abbe. An amusing thing happened here which greatly pleased Pere Baldens. The Abbe lives at 1 Plan Ste. Croix, and we went to 1 Rue Ste. Croix instead, where we were greeted by another Abbe. Our friend is quite deaf, so Pere Baldens shouted at the top of his lungs at the supposed Abbe Prieur. His amazement and surprise at being thus accosted delayed the necessary explanations, but we finally got away and found the man for whom we were looking. Abbe Prieur is a delightful old gentleman and we were charmed to have a visit with him, even though his deafness is a handicap. He presented us with pleasant souvenirs of our call and we carried away delightful memories of our short stay in his home.

That afternoon we were driven to Chateauroux, where our friends are engaged in the manufacture of beekeepers' supplies, probably the largest establishment of that kind in France, at least the largest we saw. In the late afternoon we were taken to tea at the chateau of M. and Madame de Valois, two delightful beekeepers, whose fine apiary we saw in company with some of the local beekeepers. Among them was General Count Exelmans, president of the local society. That evening we attended a banquet given by the Syndicate du Barry, and among the many guests was M. Giraud, president of the Central Federation, whom I have known for some years through correspondence. On this occasion I was presented with a beautiful gold medal, and I cannot resist telling of such a delightful souvenir of our visit. Again there were flowers and speeches, and I did my best with French. The central decoration on the table was a cake constructed like an old-fashioned skep, surmounted by an American flag. Abbe Delaigues that evening read a poem which he had written for the occasion, and he delighted all of us.

The following day we visited the Mathieu and Colleville establishment, at which time Mrs. Phillips was presented with a beautiful bouquet from the workers of the factory. This was as great a surprise to the management as to us, and they promptly declared a brief holiday, so that we might all drink wine together. Mrs. Phillips had received the flowers, but it fell to my lot to make the speech in French, to the great amusement of everyone present, with one exception. I think that I made them understand how much we both appreciated their thoughtfulness and kindness to their American guests. At any rate I did my best.

That evening we all drove to Ecueille, to the home of Abbe Delaigues, where we were served with a delightful banquet. As a host, he is a host in himself, and everybody was delighted. The Abbe was the first and only editor of Union Apicole, which is no longer published, and has written a considerable number of books on beekeeping. We already had a complete file of his journal in the Cornell library, and he presented me with a complete lot of his books for the same collection. Late that evening we returned to Chateauroux.

The following day was noteworthy, for our Chateauroux friends took us to the chateau country along the Loire River, where we saw several of those marvelous buildings, formerly occupied by French nobles. After seeing them we more fully

understood why there was a French revolution, yet they are beautiful national monuments, well worthy of the careful preservation which they are receiving. At Blois we said farewell to M. Giraud, who took a train from there to his home near Nantes, after providing us all with a delightful banquet at the hotel there.

The next day was our last in Chateauroux, and after another delightful banquet, this time at the home of M. and Madame Mathieu, we left for Paris. They were all at the depot to see us off, to give us more flowers, books, honey candy made in their establishment, and other things too numerous to mention. This was our last day in France devoted strictly to beekeepers, although we saw others later, and it was a charming farewell. Fifteen days of strenuous going with beekeepers of France tends to test one's endurance, and we slept most of the way to Paris. We did leave the train at the junction for Orleans, where we were met by M. and Madame Alin Caillas, he, whom we had also met at Chateauroux, being the author of several works on

the chemistry of honey. He is captain in the French army at present, and has been since the war, but he plans soon to leave the army and to engage in commercial beekeeping. We reached Paris that evening, where we were met by a second daughter of Pere Baldens, who had just completed her examinations for her course in dentistry.

Friday, July 2, Paris. Now we were just ordinary American tourists, and not especially proud of the fact, either. There is throughout Europe some prejudice against American tourists, perhaps especially in France and after seeing the way that a certain type of Americans behaves in a country other than his own, I am surprised that there is not still more resentment. An American who does not have any better judgment or good sense than to go about another country boasting of everything American had better stay at home. We should resent such conduct on the part of a foreigner coming into this country, and the people on the other side detest that type of American. Soon after we left Paris, a



Dr. Raymond Poutier, M. Ph. J. Baldensperger, Dr. E. F. Phillips in the laboratory at Mentone, examining mites found in Isle of Wight disease



Apiary of the University of Toulouse  
The director is shown with Baldensperger and Phillips

sightseeing bus in Paris was hissed and our papers made much of it. We saw several such busses which should have been hissed but were not. The wise plan when abroad is to stay away from tourist haunts, and this we did everywhere that such a course was possible. When we were there the French franc was low and American money made one feel wealthy, but this was certainly no excuse for throwing money about in huge tips and in otherwise making it still harder for the people of Paris. To give still another instance of what American money could do in Paris: One evening I drove from the outskirts of the city to our hotel in the center of the city and, after giving a reasonable and rather liberal tip, the bill was 24 cents in our money. If I had given a tip equal to a half dollar American, I should have made conditions still more difficult for our French friends, but that sort of thing was constantly being done by a certain type of American. They are not all like that, of course, but the loud class are far more conspicuous everywhere that they go and appear to outnumber those who try to behave decently in a land other than their own.

While in Paris we stayed at a hotel near the Sorbonne, the University of Paris, in the Latin quarter, a delightful, quiet place. We saw the sights which no American dare miss and return home, and enjoyed Paris

fully. There have been guide books which describe the city better than I can, and I must devote my space to beekeepers and their doings.

On July 4, our Independence Day, we were invited to the home of M. Perret-Maisonnette, the well known author of a book on beekeeping with special regard to queen-rearing, on which subject he has done some excellent work. His home is in St. Cloud, about fourteen miles out of the city, a beautiful suburb. We went with Pere Baldens and his daughter and found our host waiting for us with open arms. When we left Paris the city was well decorated with American flags, and when we reached our destination we again found the table decorated with our flag in commemoration of the day. It was a delightful, quiet day in the garden and among the bees. Again on the Tuesday following we went to St. Cloud and our host took us to Versailles to visit the palace there, noted among other things as being the place where the treaty was signed at the close of the great war, and he was a wonderfully efficient guide.

While in Paris I visited the offices of the Central Society of Apiculture and met several of the officers, but unfortunately M. Sevalle, the president and editor of *L'Apiculteur*, could not be present. I also met Professor Mamelle, of the Agricultural College at Grignon, who has

done much work on acarine disease in France, and he took me to visit a number of entomologists of whom I have known for years. These visits and sightseeing occupied our time until July 11, when we left for London.

## Waste Lands for Beekeeping

By Edwin Bevins

I have been reading your articles about the splendid honey possibilities of the North, especially of northern Michigan, Wisconsin and Minnesota; also on the open honey ranges of western Canada that must in time become occupied with bees and beekeepers. These must come from somewhere, and, in coming, bring more stock and understanding of sweet clover for fertility, hay and pasture, and of its unquestionable value in a balanced ration to feed along with straw. This will do much to use the surplus straw of western Canada by feeding it out with the more nitrogenous sweet clover hay, instead of burning it, as is now done, doubtless to the extent of millions of dollars in value. Bees thus may lead to better hay and pasture supply for more stock and more mixed farming.

Simultaneously with your article on the unused honey sources of western Canada and the northern states, attention was called in a forestry magazine to the centuries of combat in the mountains of France between forest growers and sheep raisers, who want pasture to keep sheep for wool and meat. Sheep are the enemy of the growing forests, since they browse on many saplings and underbrush, and the herders cut down and burn many small trees that would in time make a lumber supply.

In the United States and Canada we can see the possibility of a solution in the dispute between the growth of the forests and the feeding of stock. The lands denuded of forests and now suffering from erosion can be used either for reforestation or for stock raising, and the latter can be fostered by more attention to the legumes that bees and their culture invite.

Sweet clover holds land from erosion and keeps more livestock than many other plants. This, in itself, would tend to make more room for forest trees, in the more congested parts of Europe and America, especially on lands not suited for anything else.

Under present conditions, to pasture sheep for wool and mutton will become less and less strenuous and the land can be more easily and more satisfactorily classified for other uses.

Iowa.



# A Case Against the Italians

By F. B. Paddock

THE black bee of this country is no doubt what is now called the dark German bee, although there is a good question in regard to its origin. From very early records it seems that this bee was well distributed over south Russia, Germany, parts of Belgium, Switzerland and Austria. This race was introduced in the United States, in 1638 in New England, and 1763 in Florida. This race of bees served the industry until the ravages of foulbrood became so severe that relief measures were necessary.

The Italian race of bees was known in the United States many years prior to the time when it was adopted as a relief measure against foulbrood. The first importation was made about 1855 through Dzierzon. The first direct imports were about 1860. The Italian race gained in popularity very fast. Writing in 1864, Mrs. Ellen S. Tupper, of Brighton, Iowa, says: "The Italian bee has now been generally introduced into all parts of our country and is received with much favor." The Italian Bee Company was organized in 1865 at Des Moines, Iowa, Mrs. Tupper and Mrs. Annie Savery being partners. The Italian bee was commonly known, but still there were many who doubted its value over the "common" bee. The real wholesale Italianizing began 1900-1910, when it was held as a panacea for disease relief. Since that time the Italian bee has had an unlimited field and the battle cry still remains, "Strong colonies of Italians."

The Italian bee is immune to European foulbrood; it gathers more honey than the common, or black bee; it is vigorous against moths; it is gentle; the queen is easy to see. The queen breeders know that beekeepers want a gentle, golden colored bee in most instances, and not a pure Italian strain, which is too dark to be popular. If the strain included any other blood the result was a very cross bee.

Throughout this period of Italian ascendancy there have been rumblings. We have heard of two other races of bees, the Carniolan and Caucasian.

Importations of Carniolans were made in the early 80's, but were soon discarded with a reputation of excessive swarming. This reputation was made when beekeeping was in the eight-frame era and lasted over into the one-story ten-frame Langstroth period. Although equipment has increased to a two-story, ten-frame brood chamber and the Jumbo

and Dadant hives, the swarming reputation still lives. They are grey in color, queen rather difficult to see, hard to tell hybrid stock, but they are quiet on the comb during manipulation, gather plenty of honey, do not propolize, and, above all, winter well, especially during the spring period. They cap honey even and white.

The Caucasian bee was probably introduced in the United States about 1900, from Germany, where they were imported in 1878. They have a reputation of propolizing all equipment so that movable frame hives soon become immovable. This fact, together with their grey color, caused American beekeepers to be indifferent to their virtues. They are gentle, cap honey white, are good honey gatherers, winter excellently, especially during the spring.

There are two vices of the Italian bee which our beekeepers have failed to recognize: failure to provision the brood nest and robbing. In England the Italian bee is considered a failure because they want to store all honey in the supers, which necessitates endless feeding and manipulation in the fall. Certainly the American beekeeper is always confronted with the problem of stores in up-to-date Italian yards. Robbing is considered a menace in the apiary at any time and is always keenly guarded against whenever manipulations are in progress. Furthermore, under northern conditions the Italian bee is not as hardy and will not build up as well in the spring as either the Carniolan or Caucasian.

The real case against the Italian bee is its everlasting robbing and the

connection of this trait with the spread of American foulbrood, both within the apiary and from yard to yard. During the past seven years special attention has been given to the three races of bees, observed side by side in apiaries under special conditions. During that period, disease has been manifest and many colonies have been treated each year. With the three races present, all the diseased colonies were Italians. In talking extensively with all advocates of the other races an outstanding feature is lack of robbing. Just recently, note has been made by Corkins of the same situation in Wyoming. It was evident that the disease situation was less severe with Herman Rauchfuss, who has only Caucasian bees. Haven't the virtues of the Italians rather led us astray and into a real difficulty with the spread of disease? Isn't it worth while now to consider the aid of Carniolans and Caucasians in the elimination of American foulbrood?

(The home-bred Italians must be degenerating, if they are less provident in the brood chamber and more inclined to robbing than the common bees are. When we introduced the Italians here, fifty years ago, they packed their honey decidedly closer to the brood and were less inclined to rob than those pure common black bees did. But we must acknowledge that, when they did rob, they did so more vigorously than any common blacks. Give us the Italians, above all other races, yet. But it is quite possible that we must occasionally return to the Italian bees of Italy, if we are to retain their qualities here. —Editor.)

## Forty Years Ago, By An Old-Timer

Fred H. Dewey

THAT was in the days when A. I. Root, Hoffman, Eldridge, Doolittle, Benton, John B. Case, Alley, Hutchinson, Dr. Miller, etc., were in their glory. The system of group apiaries was not generally used. Some had one or more outapiaries, as they were termed, but the advanced method of syndicating bees was not in common vogue. During the eighties and early nineties, my brother, E. H. Dewey, now dead, and I became quite well known in the bee fraternity and among the supply dealers as beekeepers and enthusiasts. We had from 125 to 200 colonies, having a goodly number at our home in Westfield, Mass., and the

balance in Southwick, a settlement three miles away, where the pasturage was abundant and most excellent. We used the home squad for study, experiment, and rearing queens from the stock which we imported from Italy.

Our imported queens came from an Italian dealer, named Bianconcini, who lived in Bologna. This city is only twenty-five miles or so from the ancient town of Mantua. Here lived Virgil, the Roman poet, the first writer on apiculture. His poem is a mixture of romantic theorizing and practical experience. He did not have the scientific basis for his reasoning which exists today. I used

to imagine, as I watched the young of the imported queens flitting about their American homes so many miles from the haunts of their ancestors, that possibly those same bees might be descended from those which Virgil watched as he composed his poem. Our bees came from Italy via Havre and New York. When the bills came in, it seemed as if everyone who came within reach of them or was in any way concerned in their arrival had a charge to forward; we paid for almost the air they breathed. I tried my best to have them come in duty free, but the point that they were breeding stock was over-ruled. There were two frames in the four-inch-square boxes containing some Italian honey of a most exquisite flavor. A pint or so of bees came with each queen. We had good success in getting them over and good luck in introducing and rearing queens from them. They were, of course, rather dark, but distinctly banded.

As there were many stands of common bees in the country round, we went to work Italianizing far and wide. The bees in old-fashioned boxes, etc., we drove out and introduced pure Italians. The people at first were reluctant to have their bees meddled with, but the sight of the beautiful new queen and the explanations that we made won them over. I think no one in a radius of a half dozen miles held out against us. We visited twenty beekeepers, no one having more than three or four colonies. We had an ideal condition, so far as stock and breeding facilities were concerned. But the climate was unfavorable in that part of western Massachusetts. Many winters the thermometer went down to 24 below, and frequently long, damp cold spells prevailed in early spring. Our losses with the utmost care would run from five to fifteen colonies, and one winter, unusually severe and protracted, with a long-delayed spring, we lost forty stands. We gradually drifted into the pet stock business and, in the year 1900, I visited England and Belgium to select stock for our business.

The Hoffman frame was just coming into prominence as well as the Danzenbaker hive. It so chanced that I had business in eastern Massachusetts, and being at Salem I recalled that the veteran bee man, Mr. Alley, lived not far away; Wenham, I believe, was the town where his home was located. So I took a horse and wagon, cars being then not even dreamed of, and drove out about twenty miles. Mr. Alley, who, the older bee men will remember, was the inventor of the Alley drone and queen trap, was at home. He was very old and quite feeble. When I

made myself known he became excited, as every beeman, like a fisherman on his favorite topic, will do, and brightened up greatly, as if ten years had been taken from his shoulders. He had only a few colonies, a half dozen or so, and merely kept them from old habit's sake. I had a most enjoyable visit, as he was a jovial gentleman, and after a glance at his "apiarette," as it really was, we had a gay and lively conversation. He must be in the land beyond, now, as he was almost eighty then, and that was many, many years ago. I was well repaid for going, and often have recalled the experience. Mr. Alley was a person whom we bee men looked upon with a good deal of respect.

At that time the Simplicity hive had become popular. It was made at first with a beveled edge and put together by using an iron band about top and bottom before nailing. It was superseded by the recent form, owing to the trouble experienced of the side joints opening and not being sufficiently secure. The mortise goes together more easily and quickly.

Some were then moving apiaries here and there to catch local flows, but this was a rare occurrence. Sage honey played a good part as a big honey crop. There was, too, considerable basswood timber still standing, which the steam sawmill and the timber lot stripping methods have made rare indeed. Honey did not command the prices of today. Comb honey was retailed for 20 to 25 cents for extra fine, and extracted could be bought for 10 cents a pound. Six to 8 cents for extracted, 15 to 18 or 20 cents for comb was about all the bee man could expect. Everything was much cheaper in those days and, though we handled less cash, we banked more than we can do now. Very nearly the same methods for surplus and the same sort of extractors are now in use as then. There are differences, of course, in the handling of bees, but the methods are essentially the same so far as I can see without having bees now.

It is a dream of ours again to have the little fellows and see again the mighty mysteries of the beehive. When beekeeping once gets into the blood,—good-bye to any hope of living without a twinge of longing for departed days. It is a wonderful business. In what calling is there the fraternity and general good feeling that is found among beekeepers? Honey must sweeten our perverse human natures. No wonder apiarists become enthusiasts. All honor to Langstroth and the other pioneers who have made this calling a vast and flourishing business!

## Large Hives

By B. Wright

May I offer a comment on your editorial on large hives for breeding, in your December issue, where you say "The English are making quite a little stock on the fact that Dr. Phillips told them that only 5 per cent of the bees in the United States are kept in deep frames of the Dadant pattern"?

It was to the Apis Club that Dr. Phillips said that only 5 per cent of modified Dadant hives, compared with 95 per cent of ordinary Langstroth hives, are being manufactured in the states, and it is not the Apis Club people who have been making capital out of the alleged failure of the Dadant hive to come into extensive use.

The English are supposed to be a conservative people, and certainly there is a section of British beekeepers who take a long time to see the advantage of anything new. They do advance. In the last fifty years they have given up skeps and sulphur and feeding bees on stale beer in the winter, and they have got as far as the ten-frame British standard hive. Many beekeepers in Britain look on a swarm as a sign that the bees are thriving, and think they have had very good luck if a colony produces a rack of twenty-one sections at the end of the season. They will advance still more. As the years roll on, in their own good time they will come to appreciate the merits of the large brood chamber. Meanwhile they take pleasure in ridiculing things which they imagine must be impossibilities.

My recollection of what Dr. Phillips said at the Apis Club conference is that he had been informed by the big American manufacturers that only 5 per cent of the hive bodies they are turning out take the big frame. This puts a face on the matter, for if we assume that each Dadant hive requires four ordinary Langstroth hive bodies as extracting supers, it follows that 20 per cent of the Langstroth bodies are used for Dadant hives, and that a quarter of the output of hive bodies belongs to the big brood chamber system.

There is another point to be noted: that many beekeepers use a double brood chamber of ordinary Langstroth sized bodies, and this, though not the Dadant system, is plainly a vindication of the Dadant principle of the large brood chamber.

I entirely fail to see how the ultra-conservative section of British beekeepers can make capital for their tiny brood nests out of these facts.

England.

## New Zealand Honey Control Board Apparently a Burden On Producers

A report just received from the American Consulate at Wellington, New Zealand, states that prominent exporters are not entirely satisfied with the operations under the Honey Export Board. A levy of one-sixteenth penny per pound has not proved the only expense. An advertising charge of one penny per pound and fourteen-hundredths of a penny for special commission, and a further levy of six-hundredths of a penny have been made in addition.

It is argued by these parties that English houses would be pleased to handle the business at 2½ per cent and would secure better prices than the 4½d per pound realized by the board during the past year. The present charges are said to represent more than 25 per cent on the price realized, leaving the producers much less than the average returns realized before the board took charge. It is further stated that the board has eliminated healthy competitive buying because of limited channels of distribution. Altogether, the situation is not at all favorably viewed by the producers. — Confectionery Foreign Trade News.

## Improving the Bee Pasture

By L. H. Cobb

Not so many years ago, if one desired to add to the nectar-producing plants in the locality visited by his bees, he had to scatter sweet clover seed in his own back yard and on his own fence lines and roadsides, and even then the road commissioners would kick. Sometimes farmers would sow white clover or alsike for pasture if the seed was supplied by the beekeeper, and perhaps allow the hedgerows to be seeded to sweet clover, but not often. Now farmers welcome sweet clover, and the beekeeper has no difficulty in getting permission to scatter seed along the roads, fence lines, or in waste places. While it never has been considered profitable to sow crops just for nectar, it has been profitable to furnish seed where farmers within two miles would use it in a way to furnish bee pasture. I would not hesitate to furnish white sweet clover seed to scatter over pasture land. It is from pastures that much of the surplus will be gathered these days, for it blooms over a long period, being eaten off and made to send up new growths continually. Then some spreads to the land next the pasture and blooms heavily at the regular

season. The greater number of bees that are being kept, as pasturage becomes better, calls for still more pasturage for the years when the flow is comparatively slow for all to get a fair surplus. As it is a crop harvested without cost for production and without decreasing the feeding value of the pasture, there should be plenty of bees to furnish much of the sweets used in every neighborhood. Honey may as well take the place of a large part of the sugar we import. It is sweeter and more healthful, so why waste it? It has always puzzled me as to why more honey is not used as a regular diet in every family. The growing of sweet clover for pasture, and replacing weeds along roadsides and in waste spots with it, will encourage the keeping of bees by the best methods and cause a greater selling campaign among those now treating the little surplus they have as so much velvet and making no effort to increase the demand locally. Farmers

who keep bees should learn the right prices for it and then sell at that price, instead of selling their surplus for half price to get rid of it, and then increase their crops to make them profitable. Kansas.

## United States Honey Exports, October, 1926

Exports of honey from the United States during the month of October, 1926, amounted to 761,553 pounds, a small gain over exports for the corresponding month of 1925, when shipments aggregated 752,371 pounds.

Germany continues to be our best customer for honey, exports to that country during October totaling 609,480 pounds; Denmark was second with 66,360 pounds; France third with 46,102 pounds, and England fourth with 20,505 pounds.—Confectionery Foreign Trade News.

## Live-Wire Wyoming Bee Men



WHEATLAND, Wyoming, is the center of a prosperous irrigated district and an important honey producing region. The valley is well stocked with bees and there are enough large scale honey producers to stage a live bee meeting at any time. When the associate editor of this journal passed through there last summer he was surprised at the extent of the beekeeping business in that corner of Wyoming. The picture shows a group of beekeepers that he met at the apiary of C. V. Woolsey. From left to right they are: C. V. Woolsey; John Osborn,

deputy bee inspector from Laramie, who was working in that county for the summer; J. F. Weybright, who finds beekeeping an interesting diversion from his regular business of railroading, and F. S. Harter, one of the most extensive honey producers in that section.

Most of the honey which goes to market from this region is from alfalfa and sweet clover and is of very high quality and light color. The long distance from market and high freight rates are the greatest drawback to honey production in this part of the West. F. C. P.



# Package Bees North and South

By M. G. Dadant

Part One

## Volume of the Business

WITH each succeeding year the demand for bees is becoming larger. The northern producer desires bees to make up winter losses, to strengthen weak colonies in spring or to make increase. Far better it is to depend on the purchase of bees for these purposes than to try to rear them in the apiary, especially in those regions where the honey season is short, and as a consequence the bees can only be raised for divisions, strengthening, etc., at the expense of the honey crop.

For this reason the shipment of bees from the South to the North has rapidly grown from year to year. But formerly such shipments consisted of bees in full colonies, or on combs called nuclei, undoubtedly the preferable manner of getting bees, were all conditions desirable or ideal.

Since 1910, the rapid progress in successful shipping of combless bees has meant that the tide has turned in favor of this method of shipping and for several reasons.

In the first place, package bees can be purchased much cheaper, since the shipper retains the combs, and can, in favorable locations, take a package or two from a colony and still get that colony in producing shape by the time the main honey-flow opens. In the second place, live bees take double first-class express rates, and the combless package makes the lightest possible weight for express shipment, at the same time allowing the maximum number of bees. Thirdly, combless packages are not likely to carry disease, and there is not, therefore, the chance (be it ever so remote) of introducing disease into the colony and location through this source.

The fourth reason, and probably one of the major ones, is that there is no set standard as to what a nucleus consists of, whether a two-frame nucleus shall have half of each comb sealed brood with a pound of bees added to the package, or whether half of this is satisfactory, or just what a nucleus or full colony will consist of.

A number of shippers favor shipping their package bees with one or two combs to act as clustering agents, and for feed, claiming there is less danger of shipping losses. In all such instances there should be a definite understanding between purchaser and producer as to what is to be furnished and what is expected by the buyer, to prevent misunderstanding and the confusing of such a package with a true nucleus.

The trend in favor of the package without combs has grown to such an extent that it is probable that in the United States and Canada 80 per cent of the bees shipped by carload or express are now shipped in combless packages.

Mr. L. T. Floyd, Provincial Apiarist of Manitoba, estimates that at least 10,000 packages will enter Manitoba during the season of 1927. Such being the case, there must surely be twenty or thirty times this number being distributed each year by the entire lot of package shippers. Many producers now order as high as five hundred packages in a season, and orders for fifty to two hundred packages by one individual are not infrequent.

The question has arisen as to the advisability of the northern man depending entirely upon packages, and doing away with his wintering problem by making no effort to winter over his bees, but start anew each spring. It hardly seems likely that this will become common practice, however, since it has never been generally considered that packages could take the place of wintered-over colonies. There is also the danger that the southern shipper may be confronted with unusual weather conditions and may be unable to deliver the bees at the propitious time to make a maximum colony for the honey crop, thus losing for the producer a year's crop of honey.

## Package Sizes, Shipment, Etc.

The consensus of opinion now is that the larger package, at least the two-pound size, is preferable. Mr. Floyd, previously mentioned, is in favor of the two-pound package as being sufficient, since this number of bees can cover all the brood furnished by a good queen. He says this is the only province of the package, as all its bees die before the major flow starts, and it is upon the newly hatched bees in the new hive that the crop depends. Others like the three-pound package, because it furnishes a larger field force at the beginning, and one which can better draw out combs and store honey at every opportunity.

These packages may come either with the laying queen loose in the package or she may be confined in a queen introducing cage, properly fastened inside the package in such a manner that she may not be released en route, but so that the bees

of the package may cluster around her. The latter is the generally accepted method. Under no conditions should the queen cage be tacked on the outside of the package, because a cool spell during shipment will almost always mean the death of your queen. Nor should the queens come separately. They are harder of ultimate introduction, may be lost or suffocated in the mails, or may become chilled. Delays, between the receipt of package and of queen, are hard to rectify. Queenless packages for strengthening colonies are sometimes bought. Danger of loss with these is greater, as the bees seem to worry in the packages.

The package of itself should be well built, strong enough to stand the exigencies of an express trip, and should be well ventilated. A moderate sized cage is better than a smaller or larger one which may allow suffocation or chilling, as the case may be.

In the past, most packages were shipped with sugar candy as feed, and in many instances an additional can of water was suggested as necessary. Although candy is still used, the water can has in almost all instances been abandoned as unnecessary. Probably a large majority of combless packages are now shipped with sugar syrup as feed, this syrup being of different proportions, but mostly in a proportion of one to one water and sugar, the cans being suspended in the cage and one or two holes (very small) allowing the bees to take the syrup as needed. Two are better than one, since this precaution obviates any loss through clogging of a single hole. A pint of feed should supply a three-pound package for a five-day trip in ordinary weather.

It is imperative that the bees in the package be young, if they are to survive their long rail trip and be of maximum service to the recipient in building up a strong colony. Some southern shippers have lost business through failure to recognize this point. They should have a young and pure queen, and contain a minimum of drones, useless consumers en route and in the new hive.

Since war times, combless packages have been permitted in the mails, but unless the purchaser is located far from an express station and in close reach of a rural route, it is best to have the bees come by express. The rates are high, but delivery in good condition is incumbent upon the railroad company, and

a claim may be presented if bees arrive in unsatisfactory condition.

#### Ordering Package Bees

Err by ordering your bees too early rather than too late, and err by ordering a few more than you need, so that you can make up for such losses as may occur on the road. The queen breeder and package shipper gauges his spring production of bees largely by the number of his early orders. Such orders get first attention, and current orders received in the height of the season must wait their turn in any surplus of bees he may have. So order early.

Order your packages with queens (preferably the queen in a cage inside the package). Some claim best success where the queen alone is in the queen cage without attendants. Others accompany her with attendants.

Have your bees delivered early. In the north central states, beekeepers usually like to have the bees arrive at the beginning of fruit bloom, as this gives them a flow to work on immediately on arrival. It is more important, however, to gauge time of arrival by the time of the beginning of the first major flow. There should be an interval of from six to eight weeks between receipt of package and beginning of major flow, so that the queen may have an opportunity to lay and the bees to build up a normal colony by the time the flow

starts. If, therefore, you are in a white clover location where the flow starts about June 1 to 15, try to have your bees arrive about April 15 to May 1.

Be sure of your terms with the breeder from whom you are ordering. Nothing is more annoying to both parties than a quibble over the terms after the bees have been shipped, both sides claiming that it was self-understood that such and such terms were to apply.

Never postpone your order on account of inclement weather. Your bees are scheduled for a certain day. If the breeders get instructions to delay shipment, then you have to take the place of some other customer who has already asked his bees to be shipped on the revised date set by you. As a consequence, usually, instead of usurping that date, your order gets pigeon-holed, to be sent whenever the breeder has an extra quantity of bees and queens he can spare, which may not be for two or three weeks. Let the packages come forward as originally specified and arrange to take care of them. If it is exceptionally cold, remove them to the cellar, and even introduce them there, setting them out at the first opportunity. Package bees will stand considerable cold if not forced to agitate themselves unusually, especially if given some protection and plenty of feed.

soon appears, his head bedecked in screen. He is an Indian, too.

The Uintah and Ouray Indian reservation—where honey is among the principal industries—lies in north-eastern Utah, in what is commonly known as the Uintah Basin. Uintah and Duchesne counties embrace the reservation land, about one-half being in the one county and one-half in the other, with headquarters located at Fort Duchesne. There are 1178 Indians on this reservation—Utes (three distinct bands, namely, Uintahs, Whiterivers and Uncompahgres)—and they have 325,000 acres of choice land in that locality.

While their principal activities are farming and the growing of livestock, they are also devoting some of their time to producing honey, according to Superintendent F. A. Gross, and are quite successful at this industry.

The growing of alfalfa and hay—the principal crop—furnishes plenty of blossoms from which the bees can gather their pollen. Sweet clover and the alfalfa blossoms give the honey a flavor that has made it famous.

Incidentally, the education of the Indian children is taken care of through the government and public schools. The government maintains a splendid school at Whiterocks, Utah, on the reservation, where boys and girls receive training along academic and vocational lines. Many of the boys and girls attend the public schools scattered over the reservation. Each year some of the older boys and girls are sent to non-reservation schools, such as Haskell and Sherman institutions, the former being located at Lawrence, Kansas, and the latter at Riverside, California. The boys are making splendid progress, and so are the girls, along educational lines, and there is very little difference between their ability and that of the white children.

They are also rivalling the white men in the growing of honey, and it is reported that some of the best honey in the state will soon be produced in that section.

The red bee men of Utah are progressing right along and their future is very promising.

Success to them!

Utah.

## The Red Bee Men of Utah

By Glen Perrins



An Indian beekeeper's moveable extracting outfit

"OUCH, ouch!" yelled the Indian youth, shaking his hand wildly.

How different was his cry from the battle songs of the redskin warriors of the olden days! No longer did the brave dance about a fire, his victim tied at stake. The Indians are become domesticated.

The scene is with the Indians in the days of peace. The youth has just ventured too near the beehive and one of the guardians of the apiary has struck him on the hand. Bees are being raised on the reservation.

Laughing, the other Indian youths look on. The owner of the apiary

### Honey Fruit Cake

- 1 cup honey.
- $\frac{1}{2}$  cup butter.
- 2 eggs.
- $\frac{1}{4}$  cup milk.
- 1 cup raisins.
- 1 cup chopped citron.
- 3 teaspoons baking powder.
- 5 cups flour and spices.

# Southwestern Honey Sources

## SOME ORCHARD TREES

By Frank C. Pellett

### The Peach

CALIFORNIA is known as a land of fruits and flowers. It is justly famous for its orchards. Among them all there is no finer fruit than the peach, although the peach is by no means confined to the balmy climate of the southwest. Throughout the southern half of the United States the peach is the most staple fruit. This being the case, it is probable that more apiaries are situated where the bees can work on peach blossoms than upon those of any other fruit tree.

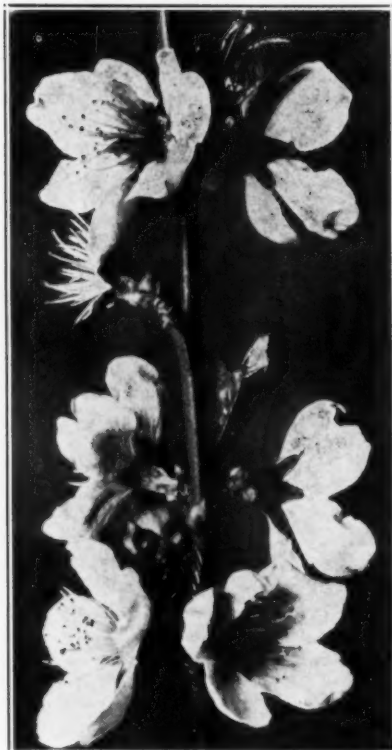
The peach has been cultivated for thousands of years and it is known to have been among the trees grown in the orchards at the time of the first writings concerning agriculture, many centuries before the birth of Christ. It seems to have been generally distributed from Persia. It is commonly credited with having originated in that country, but the best authorities believe that it came first from China. It is known to have been cultivated in China from the remotest times, and in that country it was early mentioned as among the fruits of immortality.

Whatever its past history, the peach tree now occupies large orchards in many of our states, notably Missouri, Arkansas, New York and Georgia, as well as California. In many others, limited areas are extensively given over to peach orchards.

Beekeepers generally recognize in the peach an important source of early nectar. It is depended upon to furnish the spring stimulation necessary to build up the colonies to storing strength. For this purpose it is invaluable. Unfortunately, however, we have not, as yet, learned how to take proper advantage of this source of early nectar. The peach blooms very early in spring and we seldom find a strong colony of bees at that season. With such clusters of bees as are to be found in the hives six weeks later, peach honey would soon be known in the markets. One wonders whether in a mild climate like California we may not yet learn how to bring colonies of bees through the winter sufficiently strong to store surplus from such fruit trees as peaches and prunes, as well as saving a larger portion of the orange yield.

### Prunes

A prune is a variety of plum which can be dried without removing the pit and which retains its sweet



Peach blossoms

flavor in the process. Such fruits are now very extensively grown along the Pacific Coast, especially in California and Oregon. It would be hard to imagine a more beautiful sight than a California prune orchard

in bloom. In the valley not far from Chico there are thousands of acres, and I cherish the memory of the sight of these trees in bloom. It was a balmy day in March and the blossoms were at their best. From where I stood the orchards stretched away in every direction as far as eye could see. The humming of the bees among the blossoms, the perfume of the flowers carried on the quiet air and the beauty of the scene made a combination of sight, sound and smell that was fairly intoxicating. Happy should be the man who lives amid such surroundings.

Like the peach, the prune has been grown by civilized man for so long that its origin is lost in antiquity. It was cultivated in the countries around the Mediterranean Sea at the beginning of the Christian era and was carried to Great Britain by the Romans.

Since it also blooms in early spring, much of the possible crop of honey is lost to the beekeeper. While surplus honey is sometimes reported by beekeepers in the Sacramento Valley, the greater part of the nectar is consumed by weak colonies in brood rearing. It has always been assumed that, because it does bloom so early, a crop is out of the question and that there is nothing to be done about it.

In a region where hundreds of acres of bloom are available, it is worthy of a special effort to get strong colonies early.



Olive orchard near Phoenix, Arizona



### The Olive

The olive is another Old World fruit which finds itself much at home in the warm country of the Southwest. There are whole valleys devoted to olive orchards in California and extensive areas devoted to its culture in the Salt River Valley of Arizona. The olive is a long lived tree and horticultural writers mention specimens of from 500 to 800 years of age. It is mentioned in the early Hebrew writings and has been cultivated in North Africa and southern Europe since a remote period.

In California, the trees are grown for the fruit, which is pickled and sold for the table, and also for the oil. In exceptional cases as much as 2,000 gallons of oil have been reported from an acre of orchard.

Growing it in large acreage, the beekeepers near at hand have looked in vain for a harvest from the olive trees. The bees work upon the blossoms to a limited extent for pollen, but seldom find much attraction in these orchards. T. O. Andrews, of Corona, stated to the writer that only in one year, during his long residence in California, has he known the bees to get anything worth while from olives. It is probable that in this particular case it was honeydew, although Mr. Andrews did not say whether he regarded it as nectar.

English walnuts are grown in large



Prune orchard in bloom

acreage in many California neighborhoods. Although they yield no nectar, I found beekeepers who reported that in an occasional season they secured surplus quantities of rather poor quality honeydew from them. Since honeydew is gathered from almost any tree at times, this may explain the crop from the olives.

### Orange

The orange tree thrives only in frost-free regions, and in America is confined to comparatively small areas in California, Arizona, Florida, and the Gulf Coast region. Again we go to southern Asia to find the original home of the tree. There it has been cultivated for a long period. California seems especially adapted to the culture of the best of the trees which have been brought from the cradle of the race and which man has treasured for centuries.

Von Mueller in "Extra-Tropical Plants" mentions an orange tree in Versailles that is still growing, which was planted in 1421, long before Columbus sailed on his voyage of discovery. He states that there are older trees at Cordova which are still bearing. Von Mueller is one of the few botanists who takes note of the attraction of his plants to the bees. Although he lived in Australia, his



Young olive tree



Orange blossoms

work contains references to plants from many countries all over the world. I quote as follows:

"The Sorrento-honey derives its delicious perfume from orange-flowers, and it has become classical as the best and analogous to that of Hymettus."

So famous is the orange honey of California and so much has been written concerning the honeyflows from that source, that I need not discuss it in detail here. To do so would be only to repeat what has already appeared many times in these columns. To the California beekeeper it is one of the most important sources of honey, and the

quality is of the best. At times the flow is extremely rapid and lasts for three weeks or more. At such times even weak colonies will store a liberal amount of surplus and strong ones will harvest great crops. As with the other early blooming sources, the beekeeper's problem is to get his bees ready to harvest the crop. While the expert beekeeper gets a good yield from orange, the general practice is to build up on this fine flow and get such surplus as conditions favor.

#### Grape Fruit

Grape fruit is a citrus closely related to the orange and of similar culture. It is called "shaddock" in

the older writings. It is native to tropical Asia, but is not grown so generally or in such large acreage as the orange. Orchards have been planted in recent years in Florida and southern Arizona, as well as the lower Rio Grande Valley of Texas.

Like the lemon, the grape fruit is a valuable source of nectar, and the beekeeper within reach of orchards gets some honey. Neither yields so freely as does the orange, nor do we hear much said concerning them when big honey crops are under discussion.

### Wide Hives

By E. L. Lorshbough

I notice in the January number, on page 33, there is a question asked from South Dakota about using a hive wide enough for two tiers of supers on top.

I am using such a hive as that. It is just twice the width of the regular ten-frame hive and I use twenty regular frames in it, although it will hold twenty-one. I use a little wider spacing with the twenty frames. I have been using them three years along with the regular ten-frame, two-story hives, and find that the bees work better and swarm less in them than in the two ten-frame bodies. It is much less work to handle the supers, also, as they do not need to be tiered so high for the same amount of honey.

My experience has been that they will produce better crops in these wide hives than in the two ten-frame bodies. My bees averaged, in 1926, 158½ pounds of honey in the twenty-frame hives and 82½ pounds in the hives of two ten-frame bodies.

I requeened last spring and did not have a single swarm during the season. South Dakota.

### Beekeeping In Costa Rica

Our rainy season lasted a month later than usual this year. We are still having rains. But the honeyflow began a month earlier. Many colonies are storing six to eight pounds a day. The honey is bellflower and is very light in color and good quality. The forest will yield honey later. The queens I brought back with me from Czechoslovakia, also from San Antonio, Texas, are all doing fine. Their daughters are showing fine results. Two of the Italians from San Antonio are showing too much swarming tendency, but they usually lose that trait after a while.

I have never seen such a wealth of flowers. Bell flowers are all shades of the rainbow, and cover a whole grove of trees. W. B. Gehrels.



Grapefruit trees

# Personal Recollections of the Editor

## Early Writers on Bees

By C. P. Dadant

I AM asked to write about some of the old beekeepers, early contributors of the American Bee Journal. There are none of them left. Among the first are the German scientists, Dzierzon, Berlepsch and a number of others from that country. In most cases their writings were just reproduced by Samuel Wagner when he began the publication of the American Bee Journal. But very soon American writers began to give their experiences. Langstroth and Quinby were the leaders. Then came Adam Grimm, M. M. Baldrige, Bingham, Adair, Alley, A. I. Root as "Novice," Elisha Gallup and Charles Dadant.

Gallup was 47 years old when he began writing, in 1867, in the American Bee Journal. He lived then at Osage, Iowa. One of his first articles was the one in which he described the hive that he used and which was known for a long time as the "Gallup hive"; frames 10x11 inches, built on the Langstroth principle, thirteen of them in the brood chamber.

In volume V of the Journal, 1869-70, there are twenty-five articles from his pen. In volume VI, seventeen articles. He was wide awake on all subjects and none of the readers of the early years of the Journal could miss his style. He was an active worker and a capable beekeeper. It was said of him at one time that "Gallup could gallop along" on any bee subject. He rarely made a mistake in his arguments. He was very positive and took sides with what he considered as the right, without hesitancy.

He was a lover of the bees, in his young days. He wrote: "Often I heard my mother say that if she lost me when a little fellow, she was sure to find me among the beehives. My intense desire to learn and investigate the bees in every particular has been such that I have dreamed of them at night and thought of them in my waking hours to an almost absorbing extent, and today (1870) I am still a student. I find that those persons who proclaim themselves finished in every branch are the ones who in reality know the least."

Gallup was one of the early officers of the National Beekeepers' Association. His picture, taken at the Indianapolis meeting of 1870, with Dr. Bohrer, Baldrige, A. F. Moon, W. F. Clarke and N. C. Mitchell, was published on the cover page of the June 1, 1905, number of

the American Bee Journal. Gallup's photo was the one at the upper right hand corner.

Gallup was born at Melbourne, Quebec, in 1820, from American parents. He went to Wisconsin in 1859; to Mitchell county, Iowa, in 1865, living first at Osage, then at Orchard, in the same county. In later years, his health being bad, he quit beekeeping and went to live at Santa Ana, California, where he died in April, 1903, at the age of 83. He was getting again interested in bees and wrote nine articles in that year, for the American Bee Journal, the last of which was published April 30, 1903, some three weeks after his death.

We said that Gallup was very positive in his statements and took sides deliberately in an argument. Some of his letters to us show this very decidedly. For instance, in April, 1872, when Charles Dadant was asked to undertake the publication of the American Bee Journal, in place of Wagner, just deceased, he wrote to Charles Dadant a very strong letter to try to induce him to undertake it. We will leave out the name of the man who is criticized in that letter:

"We certainly ought to have a man to fill that position who understands European bee culture, also the French and German languages, if possible. Our friend Wagner was at one time on the point of giving up

the Journal, as he was losing money. But through the encouragement of myself and others, he persevered. We told him that the Journal must certainly be appreciated by the American beekeepers. And just as he got it to a paying point, he was called away from us. Yet I feel that the American Bee Journal must not be given up. If Langstroth and Otis (his sale agent) could only bring their lawsuit with . . . to a final, the latter would soon show up his true character. I know him like a book; he tried to bribe me to stop writing for the A. B. J. I have already mentioned this to Langstroth and Otis and that I have a favorable impression of Charles Dadant. I do not say this in a spirit of flattery, for it is my honest opinion. I had already informed Mr. Langstroth to that effect before I heard from you."

Those of our readers who have Doolittle's "Scientific Queen-Rearing" will find in it that Doolittle thought enough of Elisha Gallup to dedicate that work to him. He wrote:

"This book is affectionately dedicated to Elisha Gallup, my teacher in beekeeping, from whom I learned my first lessons in queen-rearing, and who truthfully claimed that around the queen centers all there is in apiculture."

Thus the readers of the American Bee Journal may be sure that capable men appreciated Gallup as much as we did.

## Shipping and Care of Package Bees

By T. W. Burleson—Read at the Platteville Meeting

THE package bee business is no longer an experiment, but a reality. If this branch of beekeeping is properly handled both the seller and the buyer find it a profitable business. Great care must be exercised preceding and during the shipping season. Preparations must begin in the autumn before the shipping season. The following are the preparatory steps:

First: A shipper should re-queen all colonies that have queens over one year old or younger if the queen is not prolific or pure.

Second: All colonies must have not less than sixty pounds of good stores for the winter.

Third: During the winter months, all inside work should be done, such as making cages, etc. (Cages with wire screen on all four sides and

crated about four inches apart prove to be the best shippers.) All arrangements for queens to be shipped with the packages should be made. If the climate will not permit the shipper to raise his own queens, contracts should be made with some reliable queen breeders for the necessary queens. The best queens obtainable should be purchased and a shipper should never accept more orders than he can fill.

After all the above preparations have been made, the shipper is ready for the spring rush.

When the actual shipping dates arrive the activities of the shipper are as follows:

First: All empty cages that are needed for orders that day are loaded into a large, screened-in cage that fits into the truck in such a



manner that all cages get plenty of air.

Second: After arriving at an apiary, take off the supers, leaving some of the bees in them. Set these aside. Place a queen excluder over the brood nest; over this place a super which has a wire screen top. This super should contain a few empty extracting combs, securely fastened. Ten or fifteen colonies can be fixed at a time. Smoke the colonies at the entrance until the bees run into the supers prepared for them. Then remove the supers, shake the bees from them through a funnel into the cages. The packages are weighed, allowing for honey contained in the bee's stomach, then caged queens placed in the shade or directly into the large screened cage on the truck.

Third: After arriving at the packing room, or honey house, the bees are unloaded and fed sugar syrup, all they will take, made of two parts of water and one part sugar. The queen is then securely fastened in the mailing cage, and placed, together with feed cans containing a mixture of one-half water and one-half sugar, in the package. The packages are then crated, addressed, and sent to the railway station.

If instructions are followed by the

carriers as printed and attached to each lot, shipping bees by the package will be certain.

By this method no drones are shipped, only young worker bees. These bees have their honey sacs full, are contented, and in an ideal condition to accept a strange queen. The queen is so caged that she cannot be liberated and killed in transit. By using combless packages and feeding the bees sugar syrup, there is no danger of contracting any of the brood diseases. This is one of the best and safest ways to ship bees successfully. If for any reason the bees do not reach their destination in good condition, when a statement is received from the express agent at the receiver's end of the line, satisfactory adjustment is made. Bees are sent to replace the loss or their money is refunded. Just as much care in feeding and protecting from cold or robber bees until they are installed should be taken by the receiver of package bees as has been taken by the shipper. If the instructions furnished each customer are followed, the shipment will prove satisfactory.

The best and most inexpensive advertising agency to be found anywhere is one composed of satisfied customers.

## Two Queens In One Hive

By Jay Smith

SOME discussion is being carried on as to the possibilities of having more than one queen in a hive and the great advantage to be derived, as it would then be possible to have enormous hives and keep them crowded with brood. Then when the honeyflow was about over, all but one queen could be removed, so as not to have a lot of useless consumers to winter over. No doubt it would be a great trick if it could be made to work. Now I don't mean to be pessimistic in this matter, but I do not believe it can be accomplished in a practical manner. Nature ordained there should be but one queen in a hive, and that seems to settle the matter. The reason I believe Nature ordained this should be is because, in my early experience, I carried on quite extensive experiments along this line and Nature "showed me."

About twenty years ago Mr. Alexander wrote of having a number of queens in a hive, and believed it could be done in a practical manner. Unfortunately he died soon after and the result of his experiments was lost.

At that time I was greatly interested, for I thought of the possibili-

ties to the queen breeder. I had dreams of wintering a hundred or more queens in one hive and having them early the next spring before queens could be reared. When one had a surplus, he could put them in a hive and keep rearing more.

With this in view, I devoted my spare time during the summer vacation to this problem. In fact the better part of one summer was devoted to this, for I felt that, if it could be made to work, it would be worth a fortune.

### Clipping the Stings of Virgins

I took two virgin queens and clipped their stings. They were then put in a cage together. They could not fight, but mercy, how they could wrestle! They seemed possessed with the idea of killing each other and would wrestle by the hour, till worn out. I put them into an introducing cage, but as soon as they were released, the bees joined in and both were killed. Then two laying queens were tried. They did not fight for long and they were safely introduced. In a few days they were still in the hive, one with two legs gone on the starboard side and the other with both wings taken off close up and all the hair removed. The bees

seemed to believe they had the queens reduced to the equivalent of one and let the matter rest at that. The queens were left in the hive for some time, but their performance did not make much of hit with me, so they were removed.

### Introducing Seven Laying Queens

I had noticed that some laying queens refused to fight when placed together. I reasoned that if I could find enough of these conscientious objectors I could put them into a hive where, if they were too proud to fight, we might breed a race of pacifists.

Twelve laying queens were placed in a jar and at once a riot broke out. When the armistice was signed five queens were dead and the seven seemed content to let by-gones be by-gones. After that they showed no animosity toward one another and acted like so many workers reared in the same hive. Introducing them to a colony was easy. A number of frames of emerging brood were selected and, after all bees were brushed off, they were put in an empty hive and the seven queens turned loose on the frames of brood and the entrance closed. These queens seemed to act like they belonged to the same family, for they always were together on the same comb. As the young bees began to emerge, the queens began to lay. They fairly filled the cells with eggs, putting in more than laying workers. I felt certain my experiment would now succeed, for as the young bees came on the scene they would get used to the seven queens and would think that they were supposed to have seven queens. As the brood emerged, the queens increased their production and the colony built up at a rapid rate. But one morning I found a dead queen in front of the hive, and later another and then another. I examined the colony and found the bees balling a queen. Soon she was carried out. The bees continued this reducing exercise for some time, till finally they had killed all but one.

Two things were learned in this experiment: One, that queens could be introduced to each other; two, that it is the bees that refuse to stand for this multiplicity of step-mothers and cause the trouble.

Many other experiments along this line were carried out, but with the same result, so that is why I believe Nature ordained that there shall be but one queen in a hive in general practice.

(We agree exactly with Mr. Smith. Two queens in one hive are sometimes found, especially, as explained more than once by Dr. Miller, when

the old queen is being superseded. I have quite often found a case of this kind. But when it looked as if this was a settled matter, the next time the hive was opened the old queen was missing. A number of men thought they had solved the problem and could keep two or more queens in a hive, living peaceably together. J. E. Hand, some twenty years ago, asserted this so positively that I wondered whether he was right in saying, page 144, May, 1908, American

Bee Journal: "The opponents of the two-queen system are not up to modern methods of queen-rearing, or they would not attempt to magnify the difficulties and cost of rearing an extra queen for each hive." This looked very positive and I wondered whether we were really behind the times. But J. E. Hand is gone from the field and the two-queen system has also disappeared, except in the minds of a few inexperienced innovators.—Editor.)

## A Great Convention

A Report of the New Orleans Meeting of the American Honey Producers' League

By C. L. Corkins

THE recent convention of the American Honey Producers' League held in New Orleans was characterized by many of the "old-timers" as the greatest in the history of the organization. Most certainly Dr. L. C. Spencer and his Louisiana "gang" left no stone unturned in the provision of entertainment and enlightenment in America's most interesting city for the benefit of their guests from eighteen states and the District of Columbia.

The officers elected by the convention to guide the affairs of the League during 1927 were: President, Prof. H. F. Wilson, Madison, Wisconsin; vice-president, Cary W. Hartman, Oakland, California; directors, E. S. Miller, past president, Valparaiso, Indiana, and T. W. Burleson, Waxahachie, Texas. Frank Rauchfuss, of Denver, holds over from last year as a director. This new board of directors selected C. L. Corkins, of Laramie, Wyoming, as secretary-treasurer. Prof. J. A. Munro, of Fargo, North Dakota, was elected election commissioner.

Undoubtedly the outstanding business accomplishment was the sweeping revision of the constitution, which will broaden the scope of the League's activities and make it more truly representative nationally. The striking improvements, which here can only be briefly enumerated, are:

1. A clarification and enlargement of the purpose of the League, especially with reference to educational, research and marketing problems.

2. Provision of a board of directors to be elected by mail ballot, one from each of ten defined districts of the United States and an eleventh to be elected by them from the membership at large. This board will select from its own ranks a president, vice-president and treasurer, and employ a secretary.

3. An enlargement of the financial possibilities of the League, by which

the secretary will be able to automatically enlarge the service of his office and receive compensation in proportion to the work he does for the League.

4. Both individual and organization memberships will be admitted to vote through certified proxies.

Perhaps the best news of all is that the new board of directors authorized the president and secretary to enlarge the next issue of the League Bulletin to sixteen pages and to eventually change its name. It is the first purpose of the new administration to make this publication alone worth the entire cost of membership. To this end it seeks the cooperation and active support of practical and scientific beekeepers alike.

The educational program of the convention was worth the expense of the trip to any delegate. Fortunately most of the context of this feature can now be taken to every member of the League because of our new policy of publication. The spirit and the friendships, alone, you will now have to miss—and here you miss the best things of a beekeeper's life.

Mention cannot even be made of all the speakers, as practically every one gave something of great worth to the convention. But we cannot pass without introducing you to some of the outstanding leaders and their topics, who will bring their messages to you through the Bulletin during the coming months:

Miss Mary I. Barber, of the Kellogg Company, gave, without question, the greatest spiritual uplift of the time to a down-hearted American beekeeping public in her charming and informing address on "Honey and Cereals." You may think you fully realize what Kellogg Company is doing for our whole beekeeping fraternity, but you don't until you get Miss Barber's own words.

On our great national problem of

marketing honey, such eminent leaders in the field as Mr. Rauchfuss, manager of the Colorado Honey Producers' Association, George S. Demuth, of A. I. Root Company, and Charles B. Justice, of his own successful honey marketing organization in San Diego, California, gave us a forward look and a practical foundation to stand upon.

The greatest challenge of the century to scientific beekeeping development has been the recent startling announcement on artificial mating of queens. Now to our convention came one Robert E. Foster, of Gainesville, Florida, heralding to the world the discoveries of a modest scientist, Mr. Charles W. Quinn, of La Belle, Florida. Yes, scientist! He holds the honored and much coveted degree of Doctor of Engineering, a distinction earned by mighty few American scientists.

Mr. Foster told us that for fifteen years Mr. Quinn has been studying artificial mating of queens. For three years he has been accomplishing it in a most practical manner and has taught his son-in-law to become so efficient at it as to lose very few queens. His method is the most simple yet discovered or suggested. Furthermore, he has successfully artificially inseminated drone eggs and raised queens from them, which were later successfully mated artificially.

Have we come to another turning point in the beekeeping history of the centuries comparable to Langstroth days? It looks possible.

At the present time only two bids for the 1928 convention have been pressed before the board of directors. These are San Francisco and Des Moines. No choice has yet been made.

## Wintering In Pike's Peak Region

Bees in the Fountain Valley and the Pike's Peak region are going through in good shape and have lots of stores left. We have had as dry a winter as we have known for a long time. If we don't get some moisture we will be out of luck. Here's hoping we get it later.

J. E. Elliott & Sons,  
Fountain, Colorado.

## A Long Time Reader

In renewing his subscription to the Journal, Arthur F. Brown, of Daytona, Florida, writes that this is the fortieth year that he has read the magazine. After all these years he is as enthusiastic about bees as ever and has a glass observation hive beside his couch, where he can watch the bees at his leisure.



## More About that Brood Count

By J. H. Merrill

THE Rev. Mr. Wright says (December American Bee Journal, page 595,) that Manhattan, Kansas, is out of the limestone area. To those who know differently this remark savors of the humorous. When I lived there I paid taxes on a water-softening plant which was erected for the purpose of removing enough lime from the water to make it better fitted for household uses. The wonderful growth that alfalfa and sweet clover make in and around Manhattan, without requiring any soil inoculation, is further proof that there is plenty of lime in the soil.

I do not know why he should believe that the bees there are constantly on the verge of starvation. I have known of colonies making as high as three hundred pounds of surplus within a short distance from Manhattan. My own bees there frequently exceeded one hundred pounds per colony. I had large colonies of bees and used the modified Dadant hives exclusively, which I found to be well suited to the locality.

The title of that article was "Relation of Brood Rearing to Honey Production." It attempted to show the amount of honey which was stored by a known amount of brood. A table was included which recorded the amount of honey stored each day during the honeyflows. Among other comments which appeared in the Bee World, the Rev. Mr. Wright compared our system of recording gains to that of counting only the winnings acquired from betting at horse races. I would not attempt to enter into a discussion on betting or horse racing with a clergyman, because I know I would lose. However, the system is really not as bad as all that. In recording the gains only, the losses were automatically deducted. For instance, if the hive on the scales weighed seventy pounds one day, seventy-six the next, and eighty-two the following day, we would infer from this that there were twelve pounds more honey in the hive as the result of the bees' work during these two days.

Furthermore, and what is still more important, is the fact that the correlation between brood rearing and honey production is an inverse one rather than a direct one. Hence, Mr. Wright's conclusions that our low rate of brood rearing was due to a scanty honeyflow are not borne out under Kansas conditions, at least. It must also be remembered that there is a distinction and a difference between egg laying and

brood rearing. Only a percentage of those eggs which are laid ever develop into brood. The amount of brood depends upon the number of workers which are available to carry on the work of brood rearing, other things, such as stores, being equal. (American Bee Journal, Vol. 65, No. 4, April, 1925, pages 172-174.)

In our brood rearing studies we found that this period preceded the main honeyflow. At any time when a large number of nurse bees are obliged to remain within the hive on account of inclement weather their increased number results in a more constantly maintained egg laying temperature, and, as the nurses are all within the hive, more attention can be given to brood rearing. We found that in all cases where colonies were well supplied with stores they reached their peak before the honeyflow began, after which there was a decline. Colonies insufficiently supplied with stores do not reach their peak until after the honeyflow begins. (American Bee Journal, November, 1924, pages 508-509.) Can this be the explanation of why so much more brood is reared in the colonies in England? Do climatic influences in England keep the brood rearers at the work of brood rearing better there than they do over here? Mr. Sturges reports the same thing occurring in his apiary. We have counted brood from queens from the same stock as some of Mr. Sturges' queens and found them to be no better performers than our own. If a difference does occur in brood rearing abilities of queens in different countries, we will have to look to some other cause than honeyflows to account for it.

The Rev. Mr. Wright and others have expressed the desire to know what would be the rate of brood rearing in a locality where large honey crops were produced. I have recently seen the records of some brood counts made in the greatest honey producing area in the United States. The man who made these counts will probably publish them later. I will only say here that they did not exceed any of the brood counts made at Manhattan.

Manhattan is in a limestone area; in fact, the buildings of the Agricultural College, which is located there, are all made of limestone quarried in Manhattan. There should be no difference in the rate of brood rearing between Lawrence and Manhattan, Kansas. Lawrence is a better comb honey locality than Manhattan, but there should not be a great deal

of difference in the total yields. Observations made on brood rearing in various parts of the United States agree in the main with those made by Dr. Brunnich of Switzerland. There is no evidence to show that the rate of brood rearing is curtailed by the size of our honeyflows.

(Dr. Merrill is right when he says that there is plenty of limestone in Kansas. Manhattan is practically built on limestone. But the home of the American Bee Journal is also built on a limestone foundation. Nevertheless the farmers are told by the farm advisers to put crushed limestone on their fields in quantities of at least two tons per acre. Sweet clover will not grow here unless this is done, for the soil above that limestone is sour and absolutely deprived of this material.—Editor.)

## Apiary Registration in Ontario

By F. Eric Millen

THE editorial, "Apiary Registration," in the February number, may be misleading to the beekeepers of Ontario, especially when you state "in another Canadian province the man in charge recently told the writer that they were making no attempt to enforce the registration provision."

The province of Ontario has had the registration of apiaries clause in its Foulbrood Act for two years, and thus far the results have been satisfactory. One must remember that a complete change in an act of this kind takes some time to be known by the parties concerned. The object of this clause is three-fold: First, the beekeepers are showing the Government that they are willing to contribute some portion of the money necessary for inspection work; second, the change was made at the request of the beekeepers and for their protection in making inspection work more effective; third, valuable statistics will be available with regard to the extent of the beekeeping industry.

Now with regard to enforcement of this part of the act, our government decided that every beekeeper should be given a liberal time in which to comply with the provisions, and until then warnings only were sent out in the form of second notices. At the 1926 provincial convention the beekeepers themselves passed a resolution urging the enforcement of this act, and the government has acceded to their request. Final notices have been mailed to all beekeepers whose names are on our list, and these are added to from time to time. Without further notice, prosecutions will follow. These



prosecutions will not be conducted in any spirit of vindictiveness, but solely with the objective that all beekeepers must comply with an act that became law at the request of the beekeepers themselves. We do not anticipate that there will be many prosecutions, because the great majority of our beekeepers appreciate the reasons why registration came into being.

We in Ontario believe we have another excellent feature in our Foulbrood Act—that is, the necessity of securing a permit from this office before colonies or used supplies can

be given away, sold or moved from the place where they are located. By means of this part of the act we have been able to prevent the spread of American foulbrood in numerous cases, thereby protecting many apiaries from this brood disease. This part of the act does not prevent or slow up legitimate business, provided the remainder of the provisions of the act are not violated.

In the case of commercial beekeepers, a seasonal permit is issued which allows the beekeeper to move supplies, etc., from yard to yard, this office being notified if colonies are

moved or other outapiaries started. In case of any beekeeper, knowingly or deliberately, breaking the law, prosecution would certainly follow.

## Cuban Honey Exports

Exports of honey from Cuba during the year 1926 amounted to 8,396-865 pounds, valued at \$588,046, according to a report from the American Consul General at Habana. The Netherlands, Germany, Belgium and the United Kingdom were the chief purchasers, the United States taking 28,349 pounds.

# THE BEEKEEPERS' LOOKOUT

## BEEES AND BEARS

Our friend "Bert" Woodman, of Grand Rapids, Michigan, sends this bear picture for this month's "Look-out." The bear was killed by Hubbard Brothers, well known beekeepers of Boyne Falls, Michigan. They trapped this 300-pound black bear, November 8, in one of their outapiaries, where there is an old log house. The bear had made four visits to the yard and destroyed four hives of bees before they caught him.

It so happened that the writer made a visit to these same men in company with Woodman about ten years ago. We found a most interesting region, where wild raspberry, fireweed and milkweed grow in great abundance. Good crops of light honey are secured.

Woodman writes as follows concerning the Hubbards:

"Fred and Roy Hubbard have been keeping bees very successfully for twenty years or more. They are among the best and most successful northern Michigan beekeepers and never know what a failure in a honey crop is like. The personality of these men is exceptional, and a visit to their home will demonstrate that their income is such as to supply better living conditions than those of the general run of people in the community.

"There are a number of beekeepers in northern Michigan who might be called the Nabobs of the community. They have well painted buildings, good clothes, well furnished homes, automobiles, and all the earmarks of prosperity that few in their communities enjoy. The Hubbard Brothers are in this class."

I can well endorse all that Bert says about beekeepers in northern Michigan. After ten years, I remember especially the luscious red rasp-

berries and the trout. However, they did not show us any of their bears.

### Some Duck Story

In a letter to Henry Dadant, Fred H. May, a beekeeper at Meredosia, Illinois, tells the biggest duck story



of the year. Of course our readers are familiar with the story of the floods which took place on the Illinois River last fall in the vicinity of Beardstown.

May writes to the effect that a gun club with a large preserve near Beardstown had 300 acres of their land in corn, with a crop estimated at 50 bushels per acre. The land being too wet to permit harvesting the crop, it was still in the field when the fall migration began. The combination of flooded areas with an abundant food supply attracted so many ducks that they ate the entire

crop of 15,000 bushels within a few days and then moved on to fresh pastures, leaving the gunners with but a short season in which to shoot.

May concluded his letter with, "Now that's some duck story." I certainly agree with him that it is. It would sure take some flock of ducks to eat 15,000 bushels of corn. It reminds me of a story that I heard in my boyhood of a man who bought two ducks at a sale. When he brought them home he brought out a peck measure filled with corn. He fed all the corn to the ducks and then put them both in the measure and put the cover on.

### Toads and Bees

Elias Fox, of Union Centre, Wisconsin, adds a word to the discussion about toads and bees. He replies to Stephen Harmeling in the December number. Fox says that he knows that at least one toad has eaten bees. Here is his story:

I have kept bees since 1882, and just once in my life I saw a toad eat several bees, in mid-day at that. I was extracting and as I went into the honey house I noticed a toad sitting on the doorstep. While I was uncapping a comb I heard a smack, similar to the pop produced by jerking a cork from a bottle. As I looked a bee crawled along and when within two or three inches of that toad he opened his mouth and the bee disappeared. I watched until I saw several bees disappear by the same route."

Since toads eat such enormous quantities of insects it is not surprising that they are caught eating bees now and then. At that nearly every beekeeper regards the toad as a friend, although he doesn't exactly appreciate the appetite for bees.

F. C. P.

# THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

## MAKING INCREASE

I would like very much to have your advice as to the better method of increasing the number of colonies in my apiary. Shall I buy package bees or nuclei? I have no drawn comb or frames of honey. If I bought three-frame nuclei, what time should I get them? Fruit bloom comes about April 20 and continues until May 10, when a light honeyflow begins and lasts until the white clover flow (June 1). Would they build up strong enough (on the original three frames) to draw out their own combs during the white clover flow if put in during fruit bloom?

MISSOURI.

Answer.—The method to use in increasing the number of your colonies must depend in great part upon your facilities. Nuclei are certainly good to use when you have no drawn combs, but nuclei are expensive to transport, as bees take double first-class rates in express shipments. That is why people prefer to buy bees by the pound. There is also less risk of transporting foulbrood.

If you are not very anxious to harvest a crop of honey this year, you may be able to increase your apiary largely by dividing the colonies which you have. With plenty of feed and with the purchase of laying queens and foundation, you can promptly increase your colonies, double or treble them, during the spring crop.

If you decide to use nuclei, order them delivered at the expected opening of fruit bloom. Feed them well, unless there is plenty of honey coming in. Use full sheets of foundation. A three-frame nucleus cannot expand much until it has more combs to rear brood. Remember that comb is only digested honey, so they must have plenty of feed. Usually it takes but little comb to stretch comb foundation into full comb. Give them the additional combs only as fast as they need them, so as to preserve the warmth.

Remember that it takes about thirty-five days from the egg, fresh laid, to the field worker. This should direct you as to when and how to make increase.

The cheapest way to increase is by buying bees by the pound, and queens, from the South. Put them on comb foundation and feed them.

## STARTING WITH PACKAGE BEES

In June I expect to go to Ohio University, at Athens, Ohio, and remain there until the next September. While there I would like very much to keep from five to ten swarms of bees. If I bought bees by the pound or in two- or three-frame nuclei in June, I am afraid that it would be too late for them to make me a good yield of honey.

It would be impossible for me to start them any earlier, unless I did it during the last week of March. Would that be too early for safety to the bees? I could not give them any more care till June. Could I put in enough candy to feed them till they could gather honey?

OHIO.

Answer.—It is difficult to answer safely as regards buying bees and leaving them to themselves, with just enough food to do them, for three months of spring, especially when the bees have been bought in the "pound" shape. There might be no trouble, but there are chances for enough loss to make the thing unprofitable: robbing, failure of queens, etc.

A safer plan would be to order the bees sent to reach the intended spot just when you would be there. True, there would not be so much profit the first year, but the second year might repay you for all this. If you are willing to take some chances, try the first method; if you want to play safe, follow the second.

## ADDING SUPERS WITH HONEY FOR FEED

1. I have some supers with some comb and honey in them. Will it be all right to put them on the hives now to be sure of plenty of stores for brood rearing? We hardly ever have very much more very severe weather here in southern Virginia, after this time of year. My colonies were fed up in the fall and seem to be in good shape. But I have these supers that I had put aside and would like to know if it is too early to put them on.

2. I notice some of my colonies already bringing in pollen, while other colonies are not. Is this the sign of more prolific queens in these hives that bring in the pollen so early?

VIRGINIA.

Answers.—1. I believe that I would not put the supers on until I found the bees needed more honey. My reasons for waiting would be that in early spring bees can keep one apartment warm easier than two. But whenever they show actual need of additional stores I would not hesitate to give them those combs. They must not be short at any time.

2. The colonies that bring in the most pollen are likely to be the ones whose queens are most prolific. They are at least the ones that are breeding most, whether from strength, wealth or prolificness.

## KEEPING HONEY—SUPERSEDURE

1. In filling five-gallon tin cans with honey, can it be kept in them for several years without damage to honey?

2. When bees swarm out with old, failing queen, do they start queen cells at once to supersede her?

3. Would it do to cut out queen cells ready to hatch, let queens hatch out, and give these virgins to colonies that I want to requeen?

4. Would it be all right to push the first super above the hive forward, say four or five inches, and let bees work direct into supers in place of going through bottom entrance and crowded brood nest?

5. Will a galvanized tub injure honey when used to receive drainings from cap-pings?

ILLINOIS.

Answers.—1. If the cans are of real tin and not lead tin, and are soldered on the inside so that the iron edge of the tin will be covered, the honey will keep in them perfectly. In fact, cans filled with sugar syrup will rust, while cans filled with honey will remain bright under the honey.

2. This cannot be answered positively either way. Bees cannot start queen cells until the queen has been laying for some time. But they do not always supersede her, although they do, as a rule.

3. We have never succeeded very well in introducing virgin queens. But some say that a virgin queen, introduced as soon as she is emerged from her cell, will be accepted. We had much rather introduce a queen cell ten days old, after having removed the old queen the day previous. The superseding will then be very positive, for

the bees readily accept a queen cell ready to hatch if given to them the day after their queen has disappeared, before they have made preparations to raise queen cells of their own brood.

4. This is called "staggering" the supers. It will do to stagger a super an inch or so during the hottest of the harvest, but not more, and only for a few days. The reason why it does not do to either set it back more than an inch or leave it thus very long is that the bees do not feel safe in putting any honey near that opening. So they either keep the honey away or try to close the opening after the rush is over. Bees always put their honey the farthest away from the entrance so as to defend it against robbers. Keep that in mind and act accordingly.

A galvanized iron tub will not injure honey if just used temporarily, but it is really better to use a barrel or an extractor can for that purpose. We always use either tin or wood. A well made barrel, lined inside with paraffine, will keep honey very well.

## SOUR HONEY

On seeing your editorial on unripe honey, page 12 of January number, but more particularly your statement, "for unripe honey will not granulate," I thought I would write you my experience. In August, 1925, I bottled twenty-four half-pound glass jars of my best honey, also twenty-four one-pound jars and twelve two-pound jars, and allowed it to granulate for the 1926 fair at Ionia, Michigan; but I didn't exhibit after all, but my neighbor did, and took his 1925 granulated honey, and the judge told him it was sour. Of course I felt sure mine was all right, but in December I decided to sell some to a customer who wanted only a pound, and I was surprised to find after liquefying that it was a little sour. I also found the whole lot sour. All the rest of my 1925 crop of 2600 pounds was fine. I liquefied a sixty-pound can in July, 1926, which was also very fine.

The question is, does honey sour more readily in glass than in tin? Anyway, it was granulated and also sour.

MICHIGAN.

Answer.—You are right. I should have qualified that statement by stating that unripe honey may granulate partly, but never thoroughly, after fermenting. In some cases honey may ferment, then evaporate sufficiently to granulate, but there is always a portion that separates and remains liquid. It will never granulate in a smooth manner.

Honey does not sour any more readily in glass than in other vessels, whether wood or tin.

## DIVISION OF LABOR

I understand that the worker bee's duties in the hive are nursing young bees, building comb, etc., but what is the order of the bee's work outside the hive? Does it start out by gathering honey, pollen, water, or propolis? What is its last duty? Does a bee have to perform all the duties at different times during its life, or are the different duties addicted to different bees? If every bee has to perform the different duties inside and outside of the hive during some part of its life, please give me the order that the one duty follows the other, or is this varied?

MINNESOTA.

Answer.—Your enquiry would indicate that there is always honey, pollen or propolis to be found outside. The facts are that bees may find pollen when there is as yet no honey. But when there is honey, they usually gather both honey and pollen. As to propolis, they gather this only when there is nothing else to be found, especially in the late summer, when they appear to wish to defend their hive against robbers and other insects.

As to water, they seek this before there

is any honey, for they need it in preparing the food for the young, in spring. They need very little of it when the honey is watery at the time it is harvested. We often judge of the quantity of nectar they find by the absence of the bees from the watering spots, though a few bees will constantly come to the water.

I am inclined to think that the water carriers are the young field bees, because they feel the need of water for the pup. But I am not entirely positive of this.

#### DEAD BEES—MOTHS, ETC.

1. I have twenty colonies of bees, and in January, after a long, cold, rainy spell, I saw in front of every hive seventy-five to one hundred bees lying on the ground, dead. There is plenty of honey in every hive. What is the cause of this?

2. I have ten supers stocked with combs. When is the best time to give them to the bees, and in what month?

3. I used moth balls, insect powder, and kerosene to keep the moths out. Is it necessary to air the frames before using?

4. Last year I had one colony of bees. The queen always laid in the super, and not an egg was in the brood chamber. I then put a queen excluder between. A few days after this I looked and found that the working bees tried their best to get the queen through the excluder. I then put a virgin queen in the upper part of the hive and left the old one at the bottom. After a few days I looked and found that the virgin queen was accepted. I then killed the old one and put the virgin in the brood chamber. I watched to see what they would do and found that they killed her. Why didn't they kill her before, when the old queen was still living?

TEXAS.

Answers.—1. Likely those bees got away from the cluster during the cold weather, or between two combs that had no honey, and chilled or starved there.

2. Give the bees the supers as soon as they are strong enough to need more room, especially when the honey crop is near. If you give them too early, it will increase the amount of room that they must keep warm and will have a tendency to decrease the laying, if the weather is cool. You can tell in what month to do so better than I can.

3. Not necessary to air the frames much, if the insect powder and the kerosene have not been put on or in the combs. Kerosene on combs would make the bees refuse them, I judge.

4. I wonder how you could tell that the bees tried to get the queen through the excluder; I acknowledge that this would beat me. The reason the bees killed the new queen was that she had been kept in a comparatively separate apartment and the bees evidently resented her taking the place of the old one. If she had been mated, she would probably have been accepted; though I would have expected her to be accepted anyway. But bees do not always act as we expect them to do.

#### LAYING WORKERS

I have read with interest several articles on laying workers published in your Journal during the past few years. This summer I had an unusual experience along that line, which may be of interest to other beekeepers.

Upon opening a hive, I found five frames full of laying worker brood in various stages of development. As I held a frame and watched the bees, a worker deposited an egg on the side of the cell in such a position that I saw her in the act and saw that the egg remained. I promptly captured her, carried her to the honey house and put her in a small box. Returning to the hive, I picked up the same frame and soon saw a worker in the cell in exactly the same position as a normal queen takes in depositing an egg. When she came out of the cell there were three eggs in it. I did not see her deposit the eggs as I had the other one.

## HIGH GRADE BEES AND QUEENS

2-pound package, \$2.50; with 1927 Spring Queen, \$3.50

Have 800 colonies, but will only book orders that are absolutely certain of prompt shipment with guarantee of satisfaction.

Disease has never existed here.

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Pima, Graham Co., Arizona

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Absolutely Unique—no other like it

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Suggestions, Month by  
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able Work, Fruit Growers'  
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Plant all the Bulbs with care,  
Watch them grow and bloom { And then see  
what happens

MADISON COOPER, 855 Court Street, Calcium, New York



### THE PRUDENT BEEKEEPER

Is shipping his wax to us at this season of the year to have it manufactured into

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Write us for quotation, stating how many pounds you have. At the same time ask for our new Beekeepers' Supply Catalog, No. 46E.

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## BEEWARE EXTRACTORS

American Cans and Pails, Glass  
Honey Jars, Wired Foundation  
Catalog for the asking

If you wish prompt service, write  
**B. F. SMITH, Jr., Fromberg, Montana**

If you want immediate  
action on that order  
for package bees better  
place it with me, no  
lost motion here. Ask  
for prices on what you  
need. Bees ready to  
ship March 20th,  
Queens, April 1st.

## W. H. MOSES

Lane City, Texas

**JOSEPH  
DUSEK  
COMPANY**

726 WEST RANDOLPH STREET, CHICAGO.

**HONEY Wanted, comb and extrac-  
ted, any quantity**

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Most Prolific Strain in America

Packages and nuclei April 10 to  
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ber 1. See classified ad, page 44.

Fancy White Tupelo Honey

**TUPELO APIARIES**

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Apalachicola, Florida

## "THE BESTO" BEE SUPPLIES

Largest stock in intermountain region of  
hives and other supplies, especially made  
for western beekeepers. Prompt service  
We can save you money. Write now for  
illustrated price list. Our cooperative or-  
ganization was founded in 1899.

The Colorado Honey Producers' Ass'n  
Denver, Colo.

but evidence points very strongly that she  
did lay those three eggs,—strong evidence  
that there is more than one laying worker  
in a hive, don't you think? I captured her  
and put the two laying workers in a small  
bottle of wood alcohol. I intended to send  
them, with explanations, to the Bureau of  
Entomology at Washington, D. C., for dis-  
section and analysis, but being very busy, I  
neglected it for a time. Unfortunately I  
failed to press the cork in tight enough, and  
when I went to get them to send away I  
found that the alcohol had evaporated. I  
still have them in the dry condition, if they  
would be of any value for analysis in that  
condition.

IDAHO.

Answer.—Your letter is interesting; but  
this laying of eggs by worker bees has been  
noticed many times. I have myself seen a  
dozen workers laying at the same time, in  
cells that had from one to six eggs in them  
already. I doubt that the worker you caught  
laying had laid those three eggs, then. There  
were probably two eggs on the cell already  
when she laid the third one.

If you will send those workers to the  
Department of Entomology, they may be  
willing to examine them. But the matter  
has little importance, as all our entomolo-  
gists are well acquainted with drone-laying  
workers.

### CANDIED HONEY — CREOSOTING HIVES

1. I have 1,000 pounds of light amber  
honey candied. Wish to hold for 1927 mar-  
ket. Will this honey be O. K. for next fall  
sale if properly liquefied?

2. Last fall I noticed one colony had  
killed a queen; today found another dead  
one. Is it possible they have another queen  
for spring brood rearing?

3. I want to buy new hives and boil in  
creosote before setting up. Any objections  
to using creosote on hives in flat? I have  
grapevines for shade. How long should  
creosote preserve a white pine hive so  
treated?

Harvested 2500 pounds of comb (chunk)  
and extracted honey from eighteen colonies,  
spring count. Wintered colonies in double  
brood chambers. Nearly all frames full of  
sealed honey. Honey mostly sweet clover  
and milkweed.

INDIANA.

Answers.—1. If the honey is fully ripened  
and is kept in a dry place, it will be all  
right for next year's sales. We have kept  
honey, in barrels, granulated, for as long  
as seven years, in order to be able to get  
a better price for it.

2. It is quite probable that your colony  
reared queens very late and that this is  
the reason why these queens have been kept  
this long. However, there is a doubt about  
their having a fertilized queen. Examine  
it as early in the spring as you can and  
give it another queen if it has none, or if  
the queen is not fertile. If she did not  
mate, she would probably be a drone layer  
by that time. We have seen this happen.

3. Creosote would, of course, help to  
preserve a hive a long time. But there is  
some doubt about its being acceptable to  
the bees. Try it on one hive. I have never  
tried it.

### ICE FORMING IN HIVE

I would like your advice on the cause  
and remedy of ice forming in the hive.  
This is the first time that I have found  
this condition, but I have heard of a few  
other cases of this condition around this  
part of the country.

My hives are all wintered out of doors.  
Part are where they stood during the sum-  
mer, but have a board windbreak, with  
straw packed between this and the hives,  
also between and on top of the hives, with  
the entrance left open for flight. Part are  
sheltered under a shed and packed with  
straw behind, on top and between the hives,  
with the entrance left open. The rest are  
packed in a case in shavings, with about  
a foot of shavings on the back, top and  
front and about six inches under and be-  
tween the hives. The front of the case has  
three 3/4-inch holes to the hive for the  
bees to make flight when necessary. They

wintered in this last year fine, and these  
have not been looked at since packing.

The hives are eight-frame hives, and  
frames were full of honey at last inspec-  
tion before winter set in. Each hive has  
a layer of burlap over frames, and most  
of hives have excelsior covers on them.

Is this condition of ice forming on bot-  
tom board and bottom of frames due to  
condition of honey or due to weather con-  
ditions? The thermometer has been down  
to 26 degrees below zero in the past month  
or six weeks, and not many days above  
15 or 20 degrees above. The ice has been  
taken out when I noticed the condition of  
the hives, with not much disturbance to the  
bees.

IOWA.

Answer.—Ice forming within the hive is  
due to both the cold weather and the more  
or less watery condition of the honey the  
bees are consuming. If it was not so cold,  
the moisture which the bees exhale, when  
their food is watery and more or less with  
any food, would evaporate. As it is, this  
moisture hardens into ice, just as ice forms  
upon a man's moustache when he travels  
in very cold, damp weather. Do not dis-  
turb the bees by trying to remove this ice,  
until a warm day comes, unless the ice is  
so thick that it closes the entrance, which  
I do not believe will be the case, with the  
colonies packed as carefully as you packed  
them.

If we always knew what the winter  
would be we could avoid trouble by putting  
the bees in the cellar in a winter like this.

### FEEDING BEES ROBBED OF HONEY

I have a small outyard, of twelve col-  
onies, and some rascal has taken advantage  
of the bees on a cold night (two nights ago)  
and robbed them, cutting out just about all  
the honey they had, leaving the bees prac-  
tically nothing to live on.

Now I want to know if you can put me  
onto any plan to save the bees? If I could  
gather up enough combs, could I make a  
sugar syrup and fill them with it, and give  
to the bees? Could they live on it until  
spring?

VIRGINIA.

Better than give them sugar syrup, which  
you would have great difficulty in pouring  
into the comb and giving to them in proper  
place, just make sugar candy as follows, and  
put it right over their cluster, in a cellar, if  
you have one. Separate the bees from the  
rest of the cellar with a blanket or a lot of  
thick gunny sacks and try to keep them  
slightly below 50 degrees.

To make candy: Add water to sugar and  
boil slowly until the water is evaporated.  
Stir constantly, so that it will not burn. To  
know when it is done, first dip your finger  
into cold water and then into the syrup. If  
what adheres is brittle to the teeth, it is  
boiled enough. Pour into shallow pan, a  
little greased, and, when cold, break into  
pieces of suitable size.

Be sure you do not overcook and burn it.

### FEEDING FLOUR IN SPRING

In the October number of the American  
Bee Journal, page 483, "Do They Keep  
Honey in Their Honey Sac?", you state  
that you have fed hundreds of pounds of  
flour to your bees in early spring before  
natural pollen could be gotten in the field.  
The writer wishes to make inquiry as to  
what kind of flour this was you used, and  
how you packed it in boxes for the bees  
to gather.

SOUTH DAKOTA.

Answer.—We fed several kinds of flour,  
wheat, rye, oatmeal, and even cornmeal.  
We found that a cheap grade of either rye  
or wheat flour went best.

We piled a couple of pounds of the flour  
in each of a number of boxes, not many at  
first, until the bees got started. The flour  
was packed in a lump, so the bees would  
not drown in it, but be able to alight upon  
it. Then we put some old combs in the box

(Continued on page 142)

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*For Quality—Service—Satisfaction*

SEND YOUR ORDERS TO

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## BEES \$1 A POUND

IN LOTS OF 50  
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Select Queens—Italian Carniolans

QUALITY—SATISFACTION

*Our Northern Location* makes it possible to save time and money. Book your orders early and reserve shipping date. Circulars furnished upon request

Bills of health and food certificates accompany each shipment

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BEE SMOKER**



## The Smoker You Ought to Own

NEW BINGHAM SMOKER, the most efficient and durable machine on the market. Metal legs, metal binding, turned edges; four larger sizes with hinged covers. Substantial fire-grate with abundant draft holes. Valve in bellows makes smoker respond to the most delicate touch.

Five sizes—Big Smoke (4x10); Smoke Engine (4x7); Doctor (3½x7); Conqueror (3x7); Little Wonder (3x5½)

Special circular of Bingham Smokers free for the asking

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Insist on the best—THE BINGHAM SMOKER

For sale by all agencies of the G. B. Lewis Company and Dadant & Sons. Also sold by many others in this country and abroad.

# Package Bees from the South

E. D. Townsend, Northstar, Michigan, is of the firm of E. D. Townsend & Sons, the largest producers of extracted honey in the central west. After his long experience with bees in the production of honey in the North, he knows the northern producer's needs when it comes to package bees. J. P. Camos, Loreauville, La., partner, knows the producer's end of the business, so the firm of Townsend & Camos, Loreauville, La., "Where the good queens come from," know both ends of the package business, so are in a position to supply the trade intelligently. We know that the very best way of delivering package bees to our northern customer is to ship them on a regular L comb of sealed brood, with honey enough to last them en route, by express. We could not do this, only there has never been disease nearer than 100 miles of Loreauville. Safe delivery guaranteed. We quote for the last half of April and the first half of May delivery, as follows:

10 2-lb. packages for \$37.00	10 3-lb. packages for \$45.00
25 2-lb. packages for 90.00	25 3-lb. packages for 110.00
50 2-lb. packages for 170.00	50 3-lb. packages for 215.00

At the above price each package will contain an untested queen. Tested queens or breeders can be substituted at additional price.

We are successors to J. W. K. SHAW & CO., the originators of the now famous "Aristocrat" strain of three-banded Italian bees. Why buy ordinary stock when just a little more gets this world famous stock?

## ADDRESS

**TOWNSEND & CAMOS, Loreauville, La.**

*"Where the Good Queens Come From"*

[ *Money Saved* ]  
[ *Time Saved* ]

# Bee Supplies

Root's Goods at factory prices with WEBER'S service. Send us a list of your wants and we will quote you prices that will save you money.

**C. H. W. Weber & Company**

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CINCINNATI, OHIO



**Save Time—Save Worry**

**Dadant's Wired Foundation**

Can be nailed into Lewis Slotted Bottombar Frames in a jiffy.  
And such wonderful combs!

Sold by all dealers in Lewis Beeware and Dadant's Foundation



(Continued from page 140)

to attract them at first. They soon got to gathering it and carrying it home. We never noticed any brood suffering from being fed with it, and we are inclined to believe that the dead brood complained of by some people died from other causes. They packed the pollen in the cells and used it as needed. After the first pollen began to show, we discontinued the feeding. Quite a number of bees would have kept on coming to the boxes had we not discontinued the feeding. Some seasons they took flour for pollen for two weeks, more or less. We are quite sure that it helped them.

## ADVANTAGES OF STANDARDIZATION

The United States of America is the first country in the world having a standard beehive, the "Langstroth." Here, in Europe, no country has any standard beehive; the idea of such a thing only begins to appear here and there.

The editors of the Rumanian review of apiculture, "Buletinul Apicultorilor," in whose name I write you this letter, are among those who are convinced of the advantages of standardization.

This standardization cannot be an isolated phenomenon, but a result of the whole economic experience of the American people, acquired in conditions differing from those in which we developed ourselves here in Europe. However, or perhaps just on that account, your experience may be highly valuable to us.

Therefore we beg you for your friendly help in answering the following questions:

1. What are the advantages of standardization in apiculture?
2. What are its disadvantages?
3. How did this idea take its rise in the United States?
4. If there were in America only box hives and you had to choose a movable-comb hive, what kind of beehive would you choose, and how would you justify your choice?

RUMANIA.

Answers.—1 and 2. The principal advantages of standardization lie in the ability to change bees from one hive to another and to buy or sell bees. But there are slight differences between the hives of different manufacturers.

3. This adoption of the Langstroth hive was due to the fact that Mr. Langstroth was the inventor of the first practical hanging frame. The hive which he adopted became the standard. The hive is too small for a brood chamber, as is evidenced by the fact that many now use two stories for breeding and for wintering.

4. We have shown, in the "Dadant System of Beekeeping," published in English, French and Italian, that the hive devised by Quinby and enlarged and improved by us, as described in our revision of the Langstroth book, is to our experience the best hive. It is certainly the hive which we would adopt. It is used largely in Europe as well as in America.

## DARK COLOR OF HONEY

I want to take this opportunity to ask your opinion as to the cause of the unusually dark color of both early and late honey my bees produced last summer. The later gathering is fully as dark as molasses, but has all the flavor and aroma of choicest quality.

I am located on the North Shore and my bees range the Skokie marsh.

ILLINOIS.

Answer.—I know nothing about what causes your honey to be darker than usual. It is quite probable that there was a production of blossoms different from the usual. In the fall, the growing of buckwheat would account for honey as dark as molasses. But in the early harvest I cannot imagine what blossoms would cause it.



## Meetings and Events

### North Carolina Has Good Meeting

The annual winter meeting of the North Carolina State Beekeepers' Association was held at State College, Raleigh, N. C., on January 20-21.

The plan of the program was in the main part new. A few formal talks were made and the remainder of the time was taken up by a round table discussion of important beekeeping subjects.

Dr. G. W. Forester, professor of agricultural economics at the college, made a very instructive talk on marketing, with special reference to honey. This subject was stressed from the standpoint of roadside markets. Interesting figures were given from other states that were making a success at this type of marketing of produce. The main requirements for success in roadside marketing as brought out by Dr. Forester were: Locate market on a straight, level place and give plenty of nice parking space. Judge that the value of the business will pay. Have a nice display of good produce reasonably priced, housed in a good building with attractive surroundings. A neat appearing salesman is very important.

Dr. B. W. Wells, professor of botany, gave an interesting paper on honey plants, with special reference to their location and succession on different soils.

Mr. W. M. Allen, State Food Chemist, explained to the beekeepers about honey from a chemical standpoint. The North Carolina definition of honey was given clearly as to sugar content, etc. Mr. Allen stated that real poison had never been found in honey.

Thursday evening the association gave a smoker that was enjoyed very much. The main feature of the program was an illustrated lecture by Dr. Z. P. Metcalf, professor of zoology and entomology, on "Facts and Fancies About Common Animals."

The business meeting was held Friday morning, with a good attendance. Very much interest was shown in the affairs of the association, and one of the main topics for discussion was the marketing of honey. An advertising campaign was proposed and the association is planning to spend two or three hundred dollars on advertising honey.

The committee appointed at the last meeting to consider foulbrood laws and the adulteration of honey made a report, in substance as follows: That they earnestly recommend that no action be taken on this matter of inspection and legislation that in any way would place the

North Carolina beekeeper at a disadvantage in competing with other beekeepers, or in any way interfere with the sale of honey. Concerning the adulteration of honey, the state laws are ample to take care of the situation, and your cooperation is only necessary to help start the machinery. This report was unanimously accepted.

The apiary products judging contest created a great deal of interest. Mr. J. M. Holland, of Mount Olive, N. C., won first place, and Mr. R. W. Scott, Jr., of Bolton, N. C., won second place. The first prize was a silver loving cup.

Officers elected for 1927: President, R. W. Scott, Jr., Bolton, N. C.; vice - president, D. D. Chamblee, Wakefield, N. C.; secretary-treasurer, F. B. Meacham, College Station, Raleigh, N. C.

Members of the executive committee in addition to the above officers: J. R. Pinkham, Washington, N. C.; F. R. Jordan, Wilmington, N. C.

### The Arkansas Meeting

The annual meeting of the Arkansas Beekeepers' Association was held at Little Rock on January 20 and 21, there being in attendance some fifty members of the association.

Principal action at the meeting was in recommending to the legislature of the state a bee bill. The features of this bill are that it would require the registration of all bees in the state, with an attendant tax of 10 cents per colony, the bees to be assessed and tax collected with other taxes, thus requiring no additional machinery for this purpose. The bill also would call for the selection of a state bee inspector on full time for the inspection of bees, issuance of proper certificates, extension work, and the elimination of box hives.

From the interest displayed at the meeting and the cooperation on the part of the members of the association, we can but predict success for the association in the future.

Prime movers in the action were H. K. Thatcher, Mr. Cazort, and J. V. Ormond, the two latter being chosen president and secretary, respectively, for the year 1927.

There is no apparent reason why Arkansas should not, on passage of such a bee law, take an equal rank with other bee shipping states, as well as increase many fold its production of honey. There are now within the state, according to the census, some 114,000 colonies of bees, a large proportion of which must undoubtedly be in box hives and unproductive.

## ACHORD BEES and QUEENS

The Best of Pure Three-Banded Italians

The Pick of the Honey-makers

Shipments start April 15. Order soon to secure early shipping dates.

Two-pound pkgs. with select young laying queens: One, \$4.75; five, \$22.50; twenty-five, \$106.25.

Three-pound packages with select young laying queens: One, \$5.75; five, \$27.50; twenty-five, \$131.50.

If wanted without the queens, deduct \$1.00 from the price of each package.

Shipments will have inspection certificates and all papers necessary to carry the bees through without delay. Safe arrival guaranteed. Express charges collect at destination; or if wanted by parcel post we will advise you the cost of postage.

### QUEENS

Select young laying queens \$1.00 each, any number. Tested queens \$1.75 each. Select tested, prospective breeders, \$2.50.

Producing package bees and queens has been our sole business for many years. We have passed that costly and dangerous experimental stage. Your order placed here brings highest value for the money invested. Write for complete information.

W. D. ACHORD, Fitzpatrick, Alabama

## IMPERIAL THREE-BAND ITALIAN QUEENS AND BEES

Our select strain of prolific honey hustling Italians. Orders booked in advance without deposit at the following prices: Untested queens—1 to 9, \$1.20 each; 10 to 24, \$1.00 each; 25 or more, 90c each. Two-pound packages bees with untested queen—1 to 9, \$5.00 each; 10 to 24 packages, \$4.50 each; 25 or more packages, \$4.00 each.

QUALITY FIRST our motto. Descriptive circular and guarantee free.

THE COFFEY APIARIES  
Whitsett, Texas



Every ounce of this re-processed Water

## FORMALIN SOLUTION

measures up to a given standard of strength and purity

For sterilizing combs infected with AMERICAN FOULBROOD it is the Cheapest Dependable Disinfectant.

THE DIAMOND MATCH CO.,  
Pierce Bldg., St. Louis Mo., Agents

THE D. & B. CHEMICAL CO.  
800 E. 37th St. Portland, Oregon

## Attention Beekeepers

I quote the following prices for 1927, all packages with select untested queens:

1 2-pound package	\$ 4.25
10 2-pound packages	37.00
25 2-pound packages	90.00
50 2-pound packages	175.00
100 2-pound packages	325.00
1 3-pound package	5.25
10 3-pound packages	45.00
25 3-pound packages	108.75
50 3-pound packages	212.50
100 3-pound packages	400.00

Nuclei at same prices per frame

Now booking orders for shipment after April 10. Ten per cent with order. In business over fifteen years. Certificate of State Inspector with each shipment. No disease ever in this section. Three-band Italian bees only. I guarantee safe delivery and will replace or refund on receipt of bad order report signed by express agent. I have been local representative for R. G. Dun & Co. for nearly twenty years.

**N. L. STAPLETON**

COLQUITT, GA.

## PORTER



**BEE  
ESCAPE  
SAVES  
HONEY  
TIME  
MONEY**

For sale by all dealers.

If no dealer, write factory.

**R. & E. C. PORTER, Mfrs.,**

Lewistown, Ill., U. S. A.

(Mention Am. Bee Journal when writing)



## CARNIOLANS

are very gentle, very prolific at all times, build very white combs, are little inclined to rob, rarely affected with European Foulbrood, and are most excellent workers. Average surplus from producing colonies during 1925 was 150 pounds per colony; the past season 60 pounds, and this during one of the poorest seasons ever experienced in New Jersey. At the approach of winter 1926 Carniolans were 100 per cent condition,—hives full of young bees and honey, and supers of fat combs of honey in reserve for spring feeding, if needed.

The past and previous seasons we successfully exported Carniolan queens to interior China, Japan, Korea, Australia and other nearer foreign countries. The fine condition in which bees and queens withstood these long journeys proves the great vitality of Carniolan bees and queens.

We offer queens in season, also a limited number of two-pound packages, nuclei, eight-frame colonies and a few breeding queens. Orders booked now. Ask for prices and our paper, "Merits of the Carniolan Bee."

**ALBERT G. HANN**  
Glen Gardner, New Jersey

Bee diseases apparently, though existing in some few localities, should be easily wiped out with proper effort, while the flora of the state undoubtedly will support many more colonies than are now recorded.

Out of the state speakers during the convention were E. S. Miller, of Indiana, James I. Hambleton, of the Bee Culture Laboratory at Washington, D. C., and M. G. Dadant.

### American Honey Producers' League Radio Program

From KFBU, wave length 374.8, the top of the world, Laramie, Wyoming, March 22, at 10 p. m., mountain time, will be broadcast a program on honey and bees, sponsored by the American Honey Producers' League, in cooperation with the Extension Service of the University of Wyoming. Mrs. Luella Mortensen, nutrition specialist of the University of Wyoming Extension Service, will speak on nutrition of honey. Dr. A. P. Sturtevant, Associate Apiculturist in charge of the U. S. Intermountain Field Bee Culture Station, will extol honey from a pure food standpoint. C. L. Corkins, secretary of the League, will present a sketch on "Facts of the Romance of the Honeybee." The program of speaking will be interspersed with music furnished by the broadcasting station.

Beekeepers and beekeepers' organizations are asked to give this program publicity in their local newspapers.

### Interstate Meeting of Beekeepers

The interstate meeting of beekeepers held at Platteville, Wisconsin, last summer under direction of Prof. H. F. Wilson is to be repeated. This year's meeting is to be held at Hamilton, Illinois. Beekeepers of the states of Wisconsin, Minnesota, Iowa, Illinois and Missouri will join together in a union meeting and powwow from August 9 to 11, and invite all interested in bees from the rest of the world to come also.

Professor Wilson, newly elected president of the National Honey Producers' League, is preparing the program, which will be announced in our columns in a later issue.

The American Bee Journal extends a cordial invitation to all friends to come to Hamilton for this occasion.

### Itinerant Congress of Beekeepers

We are informed by the Bureau of the Itinerant Congress of Beekeepers of German Tongue that the congress will assemble in Leitmeritz from July 30 until August 1. The main subject proposed is "Wax." Invited lecturers will deal with such subjects as: Formation of wax, wax building and its renewal for the beehive; wax pro-

duction, wax examination, use of wax, adulteration of wax, renewal of wax construction as a hygienic question. Besides, there are some urgent themes of the present day which are to be discussed. The local committee of Leitmeritz, in conjunction with the state association, are seriously endeavoring to give the congress value and importance.

### Mountain States Honey Producers' Association

The Mountain States Honey Producers' Association was recently formed at Boise, Idaho, and incorporation papers signed and filed with the Secretary of State. The new organization is the result of efforts by R. D. Bradshaw, of Wendell, Idaho, formerly president of the Idaho Honey Producers' Association.

The purpose is to get western producers together to place western honey under a brand name so as to command a good market. J. M. Stark, of Middleton, Idaho, was named temporary president.

### Saskatchewan Short Course

From E. A. Andrew we learn that a very successful short course in beekeeping was held at the Saskatchewan University from January 31 to February 4. The course was under direction of Dr. C. F. Patterson, and besides the members of the University faculty who took part, Professor Francis Jager, of Minnesota, and R. M. Muckle, former Provincial Apiarist of Manitoba, were present to give a series of lectures.

### Aberdeen District Beekeepers' Meeting

Grover Lothrop, of Aberdeen, South Dakota, gives us a generous account of the meeting of the Aberdeen District Beekeepers' Association, on December 9. Lothrop was re-elected president, with five vice-presidents to govern the sub-districts: A. J. Svarstad, N. M. Morgan, C. H. Lamport, W. S. Streeter, and F. H. Erdmann. Mrs. John Glau was elected secretary-treasurer.

### Munro Reappointed in North Dakota

The State Commissioner of Agriculture and Labor has reappointed Prof. J. A. Munro as State Bee Inspector of North Dakota for the new term of two years, beginning January 4. Professor Munro has done excellent work in eradicating bee diseases in the state.

### New York State Association Meetings

The following counties in New York have scheduled meetings: Finger Lakes Association, court house,

Canandaigua, March 4; Schoharie, March 10; Cortland, March 15; Schenectady, March 25; Herkimer, March 26. More meetings are being arranged for later. For particulars about the meetings inquire at the Farm Bureau offices.

#### Nebraska Convention

The Nebraska Honey Producers' Association held their winter meeting at Lincoln, with Prof. F. B. Paddock, of Iowa State College, as the principal speaker. A legislative committee was appointed to endeavor to secure better support for bee inspection from the present legislature. V. W. Binderup was re-elected president and Prof. Don B. Whelan secretary.

#### The King's English

They say clothes make the man. May be so. At least impressions are governed by outward appearances. Read this, from a southern queen breeder:

"As I am writing to know if I could sell you some of my good strains of pure Italian queens for next spring 1927. as I am going to raise some very good 3 banden italians queens, and my prise on untested is one dollar apiece and my breded queens is \$5 and \$7 apiece and I will guantee my queens to be as good as you can buy anywhere as I have mr millers stran of 3 banden italians and if you would like to try some of my quens for next spring i will book your order for some queens . . .

"I will cloise for this time."

My dear friend, I am thankful that you "cloised" for this time, and I am very much afraid that first appearances are such that few queens will be ordered to reward your patient effort.

#### German Honey Imports

The American Consul at Hamburg, Germany, reports that imports of honey into Hamburg during the first nine months of 1926 amounted to 6,891,650 pounds. Imports for the whole year 1925 were 10,839,780 pounds. Of the 1926 imports, approximately 932,715 pounds originated in the United States.

#### U. S. Honey Exports Increase

Exports of honey from the United States during November, 1926, amounted to 1,910,952 pounds, valued at \$166,274, as compared with 441,179 pounds, valued at \$50,305, for the corresponding period of 1925.

for March, 1927

**B**E assured of good queens and bees and efficient and experieced services by ordering from me, and at prices that compare with any. Circular and price list gladly sent on request.

**R. V. STEARNS**

**Brady, Texas**

Twelve years of successful shipping

**Honeytime**  
APIARIES

EARLY CALIFORNIA BRED

## BEES AND QUEENS

\$0.95 per pound when ordered with 100 queens.	Each, \$1.65
1.00 per pound when ordered with 50 to 99 queens.	Each, 1.70
1.05 per pound when ordered with 25 to 49 queens.	Each, 1.75
1.10 per pound when ordered with 10 to 24 queens.	Each, 1.80
1.15 per pound when ordered with 5 to 9 queens.	Each, 1.85
1.25 per pound when ordered with 1 to 4 queens.	Each, 1.95

No disease. Liberal weight young bees of Italian and hybrid stock  
Satisfaction guaranteed

Stock—1927 queens of the NEW HONEYTIME ALBINO stock. These bees have been bred for beauty, vitality, gentleness, and to have an appearance more consistent with the name. Lighter in color, they have clear white bands on a yellow, black-tipped abdomen. Pure mating guaranteed after May 20. Bees in two- and three-pound packages.

Address all orders

**HONEYTIME APIARIES SLEEPY EYE, MINN.**

## Hutzelman's Solution for American Foulbrood

Use Alcohol—Formalin to be safe

Ask your dealer or write to

**J. C. HUTZELMAM, Glendale, Ohio**

## Packages on Combs

Our sixteenth successful year. Have proofs that the natural feed for bees in transit is better. We can book your wants of packages of bees with 20 per cent now, balance at shipping time. Our guarantee: Ship on date promised, Government health certificate, light three-banded stock only, safe delivery—only require a proper notation from carrier, then your dead bees are replaced promptly, if there are any. Each package contains a standard Hoffman frame of brood and honey. Realize what a frame of brood will be equal to when hatched? Each package contains a select untested queen.

10 3 lbs.-----	\$ 45.00	10 4 lbs.-----	\$ 52.00
25 3 lbs.-----	108.00	25 4 lbs.-----	127.00
50 3 lbs.-----	212.00	50 4 lbs.-----	250.00
100 3 lbs.-----	400.00	100 4 lbs.-----	475.00

Three frames nuclei same prices as three-pound packages. If you want to enlarge your package at a small cost, add 60 cents for an extra frame of brood. Five pounds bees, two frames brood and honey, with select tested queen, \$6.50 each. Season open early in April.

References of my bank, Avoyelles Bank, Moreauville, La.

**THE LIBERTY APIARY C. A. Mayeux Hamburg, La.**  
Prop.



Finished in  
Mahogany,  
Walnut and  
Natural Gum



Every Clock  
Fully  
Guaranteed

Size  
7 $\frac{3}{4}$  x 14 $\frac{5}{8}$   
inches

### ARTISTIC MANTEL CLOCK WITH ALARM ATTACHMENT

REGULAR VALUE \$6.00

## ONLY \$2.98 CASH

*If Purchased on Our Special Plan*

This is the plan:---With every order of bee supplies of Twenty Dollars we will give one of these Artistic Mantel clocks with alarm attachment, for **ONLY \$2.98**.

Make up an order amounting to \$20.00 and include with your remittance an additional \$2.98 and we will send you one of these clocks.

Every one of these Badger clocks is fully guaranteed. They are carefully adjusted by experienced workmen and they can be relied upon to keep accurate time.

Never before has a clock like this been offered at such a low price, and if you can purchase one elsewhere (excepting where they are offered for sale on this plan) in the same size and design of case and movement, with alarm attachment, for less than \$6.00 retail, we will give you one of these clocks free.

These clocks positively will not be offered for sale at this price except under the plan outlined above.

## A. H. Rusch & Son Co.

Bee Supply Manufacturers

Reedsville, Wisconsin

### PACKAGE BEES

Three-Band Italian Bees and Queens

Now booking orders for 1927 Spring delivery  
Safe arrival guaranteed

No disease of any kind in our locality

Send for Free Circular

Two-pound package bees, \$2.50. Young queens, \$1.00

LOVEITT HONEY CO., 602 N. NINTH AVE., PHOENIX, ARIZ.

### Italy Forbids Importation of Bees

The manager of the "Federazione Apistica Italiana" forwards to us the following information, with request to publish it. He also supplies us with a lengthy decree upon the question of "Beekeepers' Provincial Trusts," apparently to help beekeepers:

To enforce application of the decree; to spread among beekeepers a knowledge of the means best adapted to prevent and combat contagious diseases of bees; to give instructions upon the rational methods of rearing bees, with special attention to the purity of *Apis ligustica*; to protect the interests of beekeepers and of their industry in the products of the apiary.

Ministerial Decree of the 30th  
October, 1926

Prohibition of introduction in Italy  
of living bees from other  
countries.

The Minister of National Economy, in agreement with the Home Secretary, considering the necessity of adopting measures of protection to prohibit the introduction in the kingdom of the bee disease "acarine," which has already appeared and is diffused in the neighboring countries, decrees:

It is prohibited (without any exception for any motive) to introduce in Italy living bees from abroad, whatever can be the manner and the form under which they are presented to the importation.

The custom house officials and the veterinary surgeons of the borders and of the ports are intrusted with the execution of the present decree, which will be compelling from the day of its publication in the "Gazzetta Ufficiale" of the (Italian) kingdom.

Rome, the 30th of October, 1926.  
The Minister of National Economy,  
Belluzzo.

### Peanut Cookies

- 1 teaspoon soda.
- 2 eggs.
- $\frac{3}{4}$  cup melted lard.
- 1 cup extracted honey.
- 1 cup brown sugar.
- $\frac{1}{2}$  cup sour cream.
- 1 teaspoon vanilla.
- $\frac{1}{2}$  teaspoon salt.
- 1 cup chopped peanuts.
- 3 cups of flour.

Cream sugar, honey and lard, add beaten eggs, dissolve soda in sour cream, flavoring, flour and salt. One may use one-half cup peanut butter in place of chopped nuts if desired. This recipe makes about one hundred fair sized drop cakes.

Bake in moderate oven.

## Poisonous Honey

Newspaper clippings coming to this office convey the information that a German naturalist, K. Krause, has recently spent many weeks in Asia Minor in search of the origin of the poisonous honey mentioned by ancient writers, Strabo, Pliny, Xenophon and Aristotle.

Xenophon told how the soldiers of his army were poisoned by eating honey. He stated that they lost their senses, vomited and were affected by purging. Those who ate but little were intoxicated, but when they had eaten liberally were like mad men. There has been much speculation concerning this ancient occurrence, but the German naturalist only confirms the previous impression that the honey came from *Rhododendron*. He mentions *Rhododendron pontica* as one of the species from which the honey came.

In American Honey Plants, under "Poisonous Honey," will be found all important references that the author could find to this subject. Xenophon's story is mentioned there, together with the plants from which the questionable honey is supposed to have come. The German naturalist, after a recent visit to the region, confirms the previous information.

## Our Cover Picture

The picture on this month's cover is of Perret-Maisonnette, whose book, "L'Apiculture Intensive et L'Elevage des Reines" (Intensive Beekeeping and Queen Rearing) we have mentioned frequently. Maisonnette lives at St. Cloud, near Paris, where he devotes himself to queen breeding and beekeeping. His book is splendid and has a large sale among French-speaking people.

## Death of C. B. Palmer

C. B. Palmer, 72, of Bradshaw, one of the noted beekeepers of Nebraska, died at his home Feb. 14.

Palmer was one of the best known beekeepers of Nebraska, contributing many articles to national magazines on beekeeping, and was known in the Middle West as an expert in bee culture.

He is survived by his widow and four children.

## Chile's Honey Export

Exports of honey from Chile during the quarter ended June 30, 1926, amounted to 637,624 pounds, according to a report made by the American Consulate General at Valparaiso, Chile, to the Department of State, made public by the Department of Commerce.

## YANCEY HUSTLERS IN PACKAGES

A strain of Three-Band Italians with a record for honey production in every section of U. S. and Canada.

Many customers report averages of 150-300 pounds surplus per package, first season. Extra liberal weight of young worker bees and select young queens, delivered to you in best of condition when you want them, is the secret of success with packages.

Get our prices and full particulars before placing order anywhere.

Our policy: "You must be satisfied"

**CANEY VALLEY APIARIES, BAY CITY, TEXAS**

## At Last—A Modern Hive Factory in Dixie

Our supplies are just as good. Why not buy Made in Dixie Hives? Made in the land of the flower and the home of the honeybee. The largest stand of virgin white pine east of the Mississippi is right at our door in the foothills of the Blue Ridge Mountains. *Agents wanted.*

*Write for prices and catalog*

**B. L. JOHNSON & CO., Roaring River, N. C.**

## Package Bees—1927 Prices THREE-BAND ITALIANS

2-lb. package with select untested queen, 1 to 24 packages	\$3.50
2-lb. package with select untested queen, 25 or more	3.00
3-lb. package with select untested queen, 1 to 24 packages	4.50
3-lb. package with select untested queen, 25 or more	4.00

We are on main trunk line railroad about fourteen hours from St. Louis. Bees shipped same day as caged. We guarantee safe delivery and will replace or refund on receipt of bad order receipt signed by express agent. Inspection certificate on every package. Ten per cent to book order. Send order early and be assured of early delivery. Yours for business,

**GEO. A. HUMMER & SON,**

**Prairie Point, Miss.**

## GOLDEN ITALIAN QUEENS BRED FOR BUSINESS

Only one grade—select. Safe arrival and satisfaction guaranteed

Untested, 1, \$1.00; 12, \$10.00. Tested, \$2.50 each

1-lb. pkg. of bees and untested queen, \$3.00; 2 lbs., \$5.00. All mail charges paid  
**E. A. SIMMONS GREENVILLE, ALABAMA**

**2000  
PACKAGES**
**JENSEN'S BEES AND QUEENS**
**THREE-BANDED ITALIANS**
**1500  
QUEENS**

Delays are often costly. The supply of bees and queens for early shipment is not unlimited in Dixie, and reliable shippers will be booked up in advance of the shipping season.

Our many years' experience, together with our winter's preparation, put us in position to render meritorious service.

Two pounds Italian bees, with untested Italian queens:

1 to 10, \$3.50; 11 to 25, \$3.35; 26 to 50, \$3.20; and 51 to 100, \$3.00 each.

Three-pound packages, \$1.00 each additional.

QUEENS (untested):

1 to 10, \$1.10; 11 to 25, \$1.00; 26 to 50, 90c; and 51 to 100, 80c each.

Never had any disease here. Try us for bee and queen service.

**JENSEN'S APIARIES, Crawford, Miss.**

## Dittmer's Foundation

We make a specialty of working your wax for cash, and NOW is the time for you to place your order, and get early order discount. WE USE ABSOLUTELY NOTHING BUT PURE BEESWAX

Write us for samples and prices

We furnish a full line of supplies

**GUS DITTMER COMPANY, Augusta, Wisconsin**

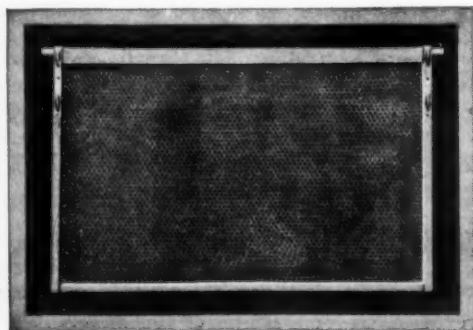
## AM-CO Italian Bees and Queens

ARE GENTLE, PROLIFIC, BEAUTIFUL AND WONDERFUL  
HONEY GATHERERS

Untested Queens—1 to 5, \$1.00; 6 to 11, 90c; 12 up, 85c each  
Two-pound Package with Queen—1 to 9, \$4.00; 10 to 24, \$3.80 each  
Three-pound Pkg. with Queen—1 to 9, \$5.00; 10 to 24, \$4.80 each

Send for free circular

**ANDALUSIA MANUFACTURING COMPANY**  
ANDALUSIA, ALABAMA



You too can  
get  
Beautiful Combs  
like this

It is so easy—a sheet of  
Wired Foundation, a Lewis  
Slotted Bottombar Frame, a  
hammer—and in a jiffy it is  
ready for use. No wiring  
to do.

Dadant's Wired Foundation is  
100% pure beeswax

**DADANT & SONS, HAMILTON, ILLINOIS**

## Middle Tennessee Queens

Fifteen years' experience  
with bees

Ten years a queen breeder  
Three-banded Italians

To July 1:

Single queen ----- \$ 1.00

Per dozen ----- 11.00

Per hundred ----- 80.00

After July 1:

Single queen ----- \$ .90

Per dozen ----- 9.50

Per hundred ----- 70.00

Day-old queens ----- 50c each

I guarantee satisfaction and  
safe arrival in U. S. and Canada

**MIDDLE TENNESSEE  
APIARIES**

Leo C. Parks, Mgr.  
Spring Hill, Tennessee

## Greatest Bee Supply Sale Ever Offered

As long as they last  
will go at cost  
prices.

Our regular stock  
of beekeepers'  
supplies, all num-  
ber one material.

Write for special quotations  
and price list today

**Charles Mondeng Co.**

159 Cedar Lake Road

MINNEAPOLIS, MINNESOTA

**Two pound Package Bees**  
WITH  
Beautiful and Prolific  
YOUNG  
Italian Queens

**\$3.75 ea.**

**OHMERT & SON, Dubuque, Iowa**

**Mention the American Bee Journal When Writing Advertisers**



## Crop and Market Report

Compiled by M. G. Dadant

For our March crop and market report, we have asked reporters to answer the following questions:

1. How much honey is left on hands?
2. Are prices stiffening any?
3. What prices are being offered jobbing for honey?
4. Condition of bees compared to 1926.
5. Condition of honey plants.

Reports show that there will be no difficulty in disposing of practically all honey east of the Mississippi River, except in some instances where the large producers have a rather large carryover. This is especially noticeable in Michigan, Minnesota, New York and Iowa.

The southeastern and New England and eastern states are extremely well cleared up.

Texas and the Southwest are improving, but the condition is not such that a person could count on all old honey being cleaned up before the new crop arrives.

It is in the intermountain territory that there is the largest amount of honey held on hand. Some producers have still practically their entire crop, but likely, on the whole, there is in the neighborhood of 20 to 25 per cent of the entire crop still on hand.

In California the situation is very much improved, over the fact that large shipments to foreign countries have been made. There will be no difficulty in disposing of practically all the old crop, of course, before the new crop is ready for the market.

### ARE PRICES STIFFENING?

Reports would indicate that there is very little indication of stiffening of prices, except probably in the New England and extreme eastern states.

Most reports are that prices are remaining practically stationary, with some reports of a reduction in prices, which is applicable especially in the states of Wisconsin and Montana, if we are to take the reports coming in here.

### PRICES OFFERED

Apparently some carload lots of honey are moving from intermountain territory at 7 cents per pound, although a number of producers are still holding their crop at this price and are only being offered on the basis of 6 to 6½ cents f. o. b. shipping point. We believe

most of the honey would go if offers of 7 cents were made.

There are reports of one or two cars moving at as high as 8 cents per pound for good white honey, but most of the sales have been made in the neighborhood of 6¼ to 7 cents per pound. Offers are being made in Arizona for light amber honey at prices ranging from 5½ to 6 cents per pound.

California commission men are offering honey from 6¼ for amber honey to 7½—8 cents for good white honey, f. o. b. California shipping points.

### CONDITION OF BEES

Very few reports are coming in of poor condition of bees, although, of course, it is a little early as yet to get any idea in the northern states. Apparently there will be considerable loss on outdoor-wintered bees from the fact that fall was late in arriving, and many bees used up considerable stores and may run short before early spring examinations.

Where the weather has ameliorated, conditions indicate that the bees are equally in as favorable a shape as in 1926 spring, and in many instances very much better. Cellar-wintered bees in the North in most instances are quiet in their cellars, the time for the losses due to activity not having yet arrived. Eighty per cent of reports coming in are to the effect that bees are in normal condition, or possibly a little better than normal.

### CONDITION OF HONEY PLANTS

Alabama, South Dakota, Oklahoma and Arizona report honey plants in not as good condition as in 1926.

In all other instances reports are to the effect that honey plants are in almost normal condition, although, of course, many of the northern and intermountain states are unable to make a report at this time.

The best reports coming in are in the white clover sections of Missouri, Iowa, Illinois, Indiana and Ohio, where the white clover is apparently covering the ground in better shape than for several years and has not so far been materially damaged by the freezing and thawing winter weather.

Taken all in all, we believe the condition of honey plants is better than a year ago, and prospects for crop throughout the white clover territory are very much better than in 1926.

## QUEEN TALKS—BY M. J. DEYELL, APIARIST GIVE A QUEEN A CHANCE TO DO HER BEST WORK

### TALK NO. 16

No matter how good a queen may be, she cannot do her best work unless conditions within the hive and apiary management are right. Many a perfectly good queen has been called poor when, as a matter of fact, the beekeeper has failed to do his part in providing necessary requirements. These requirements are:

**AMPLE STORES** within the hive for brood rearing.  
**AMPLE COMB SPACE**, which means enough good worker combs to meet the maximum laying capacity of the queen.

**AMPLE POLLEN** stored and sealed in combs the previous season is essential for early spring brood rearing before fresh pollen is obtainable.

**AMPLE PROTECTION** for the colony permits the queen to expand the brood nest in early spring without danger of brood becoming chilled.

These requirements mean good apiary management, without which it is absolutely impossible to secure the maximum crop of honey.

### ROOT QUALITY ITALIAN QUEENS April 15 to June 15

Untested—One to nine, \$1.50 each; ten or over, \$1.25 each. Tested—One to nine, \$2.50 each; ten or over \$2.25 each  
Select Tested—One to nine, \$5.00 each

### TWO-POUND PACKAGE OF BEES Prices April 15 to August 15

One to nine packages, \$5.00 each. Ten to twenty-four packages, \$4.50 each. Twenty-five or more packages, \$4.00 each

Write for Free Booklet, "Combless Package Bees"

**THE A. I. ROOT COMPANY, MEDINA, OHIO**

## CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 5 cents per word, with no discounts. No classified advertisements accepted for less than 35 cents. Count each initial or number as one word.

Copy for this department must reach us not later than the 15th of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisements of used beekeeping equipment or of bees on combs must be accompanied by a guarantee that the material is free from disease or be accompanied either by a certificate of inspection from an authorized inspector or agreement made to furnish such certificate at the time of sale.

## BEES AND QUEENS

**THREE-BANDED ITALIAN QUEENS**—Un-  
tested, \$1.00; 12 or more, 80c. Tested,  
\$1.50. Select tested, \$2.50. Apiary in-  
spected by state inspector. No disease  
found. Safe arrival guaranteed.  
Jul Buegeler, Alice, Texas.

**BOOKING** for spring 1927 my light Italian  
bees and queens. Two-pound packages  
with queen, one to ten, \$4.00; each addi-  
tional pound \$1.00. Liberal discount on  
quantity shipped on frame of honey built  
from Dadant foundation Hoffman frame.  
Satisfaction guaranteed, health certificate  
attached. Twenty per cent books your or-  
der. Circulars sent. Address  
J. L. Gaspard, Hessmer, La.  
Remember Kellogg's Cereal.

**LISTEN**—If you wish to purchase guaran-  
teed queens, write for our circular and  
price list.  
Carolina Bee Co., W. O. Curtis, Mgr.,  
Graham, N. C.

**PACKAGE BEES**—Three-band strain only.  
If you want good, clean bees, prompt  
service and fair treatment, give me a trial.  
Shipped on sugar syrup without comb. Two-  
pound package, three-band strain, with un-  
tested queen, \$3.50. Ten or more, \$3.25.  
No disease. Health certificate attached.  
Ten per cent books your order. Satisfac-  
tion guaranteed. William Piefer,  
Box 83, Gause, Texas.

**QUEENS**—Select untested, after March 15,  
\$1.25; 12 for \$14.00; 100 for \$1.00 each.  
Tested, \$2.00. Two-pound package, \$3.00;  
three-pound pkg., \$4.00; three-frame nuclei,  
\$4.00. These prices till June 1.  
Curd Walker, Vidalia, Ga.,  
The Natural Home of the Honeybee.

**BEES AND QUEENS FOR SALE**—Let us  
figure with you for your 1927 bees and  
queens. Queens, \$1.00 each; \$10.00 per  
dozen. One pound of bees with queen,  
\$2.90; two lbs. with queen, \$4.50, charges  
paid to your P. O.; \$7.00 per hundred.  
Graydon Bros., R. 4, Greenville, Ala.

**PACKAGE BEES AND QUEENS**—The three-  
band Italian; none better for honey pro-  
ducer. One-pound package of bees and se-  
lect laying queen with one frame of brood  
and honey, \$3.25; six packages up, \$3.00  
each. Same with two pounds of bees, \$4.25;  
six packages up, \$4.00 each. Extra additional  
frame of brood and honey, 75c each extra.  
Safe delivery guaranteed. Ship from March  
20 to June 30.  
Victor Prevot, Mansura, La.

**PACKAGE BEES** and untested Italian queens.  
Sternberg Bros., Lockhart, Texas.

**PACKAGE BEES**—See our ad on page 162.  
For further information write for particu-  
lars. Louisiana Southern Bee Farm,  
Baton Rouge, La.

**GOLDEN ITALIAN QUEENS**—Tested,  
\$1.50; select tested, \$2.50; untested about  
May, one to five, \$1.00 each; six to eleven,  
90c each; twelve or more, 80c each. State  
inspected. Safe arrival and satisfaction  
guaranteed. Send for price list.  
D. T. Gaster, R. 2, Randleman, N. C.

**GOLDEN ITALIAN QUEENS**—If you are  
pleased with my queens and my service,  
tell your neighbors; if not, tell me. I will  
begin shipping about May 1. You will  
make a mistake to overlook this ad. Prices,  
untested, \$1.05; six, \$5.50; twelve to forty-  
nine, 80c each; fifty or more, 75c each.  
Hazel V. Bonkemeyer,  
Rt. 2, Randleman, N. C.

**PACKAGE BEES AND QUEENS**—See large  
adv. on page 162, or write the Crowville  
Apiaries, J. J. Scott, Prop., Crowville, La.

**PLACE** your order with us for early queens.  
Caucasian breeders, daughters of 1926  
imported mothers, ready for shipment after  
April 1. Italians of 14 years' selecting.  
Caucasian untested, one, \$1.50; six, \$7.50;  
twelve, \$14.00; one hundred, \$100.00. Test-  
ed, each, \$2.50 after May 15. Italians, one,  
\$1.00; six, \$5.50; twelve, \$10.00; one hun-  
dred, \$70.00. Tested, each, \$1.50. Pure  
mating, safe arrival guaranteed in U. S. and  
Canada. Queens for export carefully packed,  
safe arrival not guaranteed.  
Tillery Bros., Route 6,  
Greenville, Ala., U. S. A.

**PACKAGE BEES** and queens. Charles Wal-  
lace, Box 35, R. 1, Glenn, Cal.

**PACKAGE BEES**—Now booking orders.  
See ad, page 160. J. W. Cutts & Sons.

**CARNIOLANS**—Gray Carniolan queens. In-  
dustrious strains scientifically interbred.  
Prices right, commencing April 1.  
C. H. Smith, Marianna, Fla.

**PACKAGE BEES, nuclei and queens.** We  
solicit your patronage on the merits of  
our quality, service and price.  
Crenshaw County Apiaries, Rutledge, Ala.

**GOLDEN UNTESTED QUEENS**—Gentle and  
good honey gatherers as can be found;  
\$2.00 each. Tested, \$4.00 each. Best breed-  
ers, \$20.00. Over thirty years a Golden  
Italian breeder.  
J. B. Brockwell, Barnetts, Va.

**THOUSANDS** of pounds of bees and queens  
ready for shipment early in April. It will  
pay you to get our prices before buying.  
Overbey Apiaries, Leonville, La.

**OUR BUSINESS IS BEES**—See our ad on  
page 160. Frank & St. John, Ripon, Calif.

**LET** me know your wants and quote you  
on your bee and queen requirements for  
1927. Circular gladly sent on request.  
R. V. Stearns, Brady, Texas.

**HIGHEST** grade Italian queens—Tested,  
\$1.50; untested, 75 cents. Package bees,  
one pound, \$1.50; two pounds, \$2.50; three  
pounds, \$3.25. Have had no disease. State  
inspection certificate with each shipment.  
Safe delivery guaranteed.  
T. L. Davis, Buffalo, Leon Co., Texas.

**FOR SALE**—Two-pound package Italian  
bees with queen, \$3.50; three-pound pack-  
age, \$4.00. Discount on 25 packages or  
more. Inspection certificate with each ship-  
ment. Book your order early to avoid delay.  
Write me. J. L. Leath, Corinth, Miss.

**STOP**—See my display ad, page 39, January  
issue, before buying elsewhere. Write. I  
have what you want and when you want it.  
Cloverland Apiary, Hamburg, La.

**FOR WEAVERS'** young queens and honey-  
gatherers, see page 155.

**PACKAGE BEES**—Pettit's quality. Person-  
ally shipped from Georgia. Canadian or  
American money.  
Morley Pettit, Georgetown, Ontario.

**TRY OUR BEES AND QUEENS**—\$ The  
most for your \$. Ten to twenty-five 2-lb.  
package, \$2.00 each; one to ten 2-lb. pack-  
age, \$2.50 each. Queens \$1.00 extra. Queens,  
the best light Italians, at 75c each for (50)  
fifty or more on orders booked by April  
1. Safe arrival at your delivery station  
guaranteed, and you must be satisfied be-  
fore our dealings are complete. Our queens  
are personally raised and are of the best.  
Give them a trial.  
Salida Apiaries,  
T. L. Nicolaysen, Prop.,  
Salida, Calif.

**PACKAGE BEES**—Three-banded Italians.  
Two-pound package bees with untested  
queen, \$3.75; five or more, \$3.50. Queens,  
\$1.00 each, \$10.00 per dozen. No disease.  
C. G. Ellison, Belton, S. C.

**FOR SALE**—Two-pound package Italian  
bees with select untested queen \$3.00.  
All bees shipped with health certificate at-  
tached. The Mangham Apiaries Co.,  
C. S. Duncan, Prop.,  
Mangham, La.

**GOLDEN ITALIAN QUEENS**—One queen,  
\$1.00; six, \$5.00; one hundred, \$75.00.  
Pound packages on request. They are gen-  
tle and they get the honey. Try them and  
be convinced.  
Sam Foley, Greenville, Ala.

**PACKAGE** bees 90c per pound in 10 two-  
pound package lots. Peterman's select  
Italian queens: 1, \$1.00; 6, \$5.50; 12,  
\$10.00; 25, \$20.00; 100, \$75.00. Delivery  
starting April 1, 1927. Safe delivery and  
entire satisfaction guaranteed.  
H. Peterman, Lathrop, Calif.

**GOLDEN** Italian queens and nuclei (or  
package bees) for 1927; the big, bright,  
hustling kind (the kind that gets the  
honey). Satisfied customers everywhere.  
Untested, \$1.00 each; 6, \$5.00; 12, \$10.00;  
100, \$75.00. Tested, \$2.00 each. Two-  
frame nuclei or two-pound package with  
queen, \$4.50 each; ten or more, \$4.00 each.  
Safe arrival guaranteed. Health certificate  
furnished.  
E. F. Day, Honoraville, Ala.

**BOOKING** orders for spring delivery. I  
have one of the best packages offered:  
two frames with brood and honey, two  
pounds bees, and one untested queen intro-  
duced. One to four packages, \$6.00; over  
five packages, \$5.00, f. o. b. here. Hoffman  
frames, some built on Dadant wired founda-  
tion. Twenty per cent books order. All  
bees shipped with health certificate.  
L. J. Bond, Big Bend, La.

**BRIGHT** Italian bees and golden queens.  
Past season we shipped packages into 32  
states and queens to three foreign countries.  
Have never had a dissatisfied customer.  
Have received many reports as "Finest lot  
of bees have ever received." "Bees are  
better than I expected." Write for prices;  
they're reasonable. Season begins April 10.  
Bees shipped from New Orleans.  
M. Stevenson, Westwego, La.

**"SHE-SUITS-ME" QUEENS**—Three-banded  
stock. None better. Untested queens  
from May 15 to June 15, \$2.00; after June  
15, \$1.50. Introduction guaranteed.  
Allen Latham, Norwichtown, Conn.

**BEES AND QUEENS**—Best and cheapest.  
Write for large catalogue.  
The Stover Apiaries,  
Tibbee Station, Miss.

**LEATHER COLORED ITALIAN QUEENS**—  
\$2.00; after June 1, \$1.00. Tested, \$2.00.  
A. W. Yates,  
15 Chapman St., Hartford, Conn.

**FOR SALE**—Italian bees and queens: 2-lb.  
packages of bees with queens, \$3.50 each;  
1-lb. package with queens, \$2.50. Queens  
bred with the greatest of care.  
O. P. Hendrix, West Point, Miss.

**EARLY** package bees and highest grade  
Italian queens. Our only business is Bees  
and Queens. We do not produce honey,  
deal in supplies or sell off a few old bees  
in the spring as a side line. Our colonies  
are worked exclusively for the production  
of young, vigorous, healthy worker bees  
for packages. Colonies are drawn on about  
every two weeks from March 20 to June  
20. Two- and three-pound packages. Fifty  
pounds or more \$1.00 per pound. Select  
three-band Italian queens \$1.00 each. Ten  
per cent deposit will book order and reserve  
shipping date. Large orders booked in ad-  
vance will receive special prices. We guar-  
antee both safe arrival and satisfaction.  
J. E. Wing, Cottonwood, Calif.  
Most Northern Breeder in California.

**PACKAGE BEES**—See larger ad on page  
149 or write for prices.  
John A. Williams, Box 178, Oakdale, La.